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Checklist

Checklist of Rust Fungi (Basidiomycota, Pucciniales) and their hosts in Indiana, United States of America

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Abstract

Rust fungi (Pucciniales) comprise a large group of ecologically and economically important plant pathogens distributed globally where their hosts grow. The first published study of rusts in Indiana was carried out 131 years ago, and a revised checklist of all Pucciniales for Indiana has not been compiled since the works of Jackson from 1917 to 1920. Efforts to compile a checklist five years ago revealed a dire need for revision due to taxonomic and nomenclatural changes. We examined historical records, including online databases and literature, as well as new and historical collections in the Arthur Fungarium (PUR) at Purdue University. We provide an annotated checklist of all known species of rust fungi occurring in 90/92 Indiana counties. Names in prior records have been updated to reflect the current classifications for this group, with cross-reference to older names. A total of 301 Pucciniales taxa across 32 genera and their host species have been verified. This work serves as a resource for statewide plant disease diagnosticians and records the extant rust fungal biodiversity in Indiana to guide research efforts, resource management, and conservation.

Key words: Arthur Fungarium, plant pathogen, Tippecanoe County, uredinology

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Introduction

Rust fungi (Pucciniales, formerly Uredinales) represent the largest natural group of phytopathogens and can cause devastating diseases in agricultural, horticultural, and forest habitats, resulting in millions of dollars in damage annually (e.g., rusts of wheat, corn, coffee, and soybeans). There are also some species that have been used as biocontrol against weeds, such as *Phragmidium violaceum* (Vargas-Gaete et al. 2019) and *Puccinia* species (Tanner et al. 2015; Bean et al. 2024). They are obligate biotrophs of plants (Arthur 1934; Savile 1971), requiring a living host for development, and have complex life cycles that may require up to seven spore types produced in five different spore stages and alternation between two phylogenetically unrelated host plants to complete their life cycles (Aime et al. 2018). Rusts are distributed across all geographical areas on wild and cultivated plants. It is expected that infectious plant disease ranges will shift under climate change (Caubel et al. 2017; Dudney et al. 2021;

Miller et al. 2022), and current lists of species diversity will allow the study of changes in their distribution. Our work seeks to document the current knowledge of rust species present in Indiana.

Rust collection in Indiana began almost 200 years ago. References date back to a specimen labelled *Aecidium dircatatum* (now known as *A. hydnoideum*) on *Dirca palustris* (Thymelaeaceae), collected by Lewis David von Schweinitz during a visit to Hope in 1831 (McCain and Hennen 1982), and records of a rust destroying the foliage of blackberries in Henry and Wayne counties in 1872–1874 (Furnas 1874). However, the first explicit report of a rust fungus in the state was made by John M. Coulter in 1876, who documented a rust on *Lespedeza violacea* (Fabaceae), presumably near Hanover (Jackson 1915; McCain and Hennen 1982). We must also acknowledge the work and legacy of Joseph Charles Arthur that made uredinology flourish in the state of Indiana. Arthur named 29 genera and 309 species of rust fungi from North America and influenced the work of uredinologists like Frank D. Kern and his successors as directors of the Arthur Fungarium (PUR), George B. Cummins and Joe F. Hennen (McCain and Hennen 1982). Indiana became a state strong in uredinology history, heavily influenced by the PUR, housed at Purdue University. This fungarium represents the major center in the United States for taxonomic studies of rust fungi (McCain and Hennen 1982; Kaishian et al. 2024).

The first account of the rusts of Indiana was presented at the annual meeting of the Indiana Academy of Science in 1890 by E. M. Fisher on the Parasitic Fungi of Indiana, with a considerable number of species mentioned; however, this work was never published (Jackson 1915). A list of those species was obtained by Dr. L. M. Underwood and was included in the first published compilation of Indiana rust fungi by Underwood (1893). It listed 88 rust species observed across 19 counties, with most observations reported from Montgomery, Putnam, Johnson, and Tippecanoe counties (Fig. 1A). Additional lists were later published, including a list of rusts of Tippecanoe County in 1896 by Lillian Snyder and supplemented in 1898 with lists from Madison and Noble counties, as well as lists for Hamilton and Marion counties by G. W. Wilson in 1905, and two complete state lists by J. C. Arthur (Jackson 1915). An updated list was published by Jackson (1915), reporting 141 rusts, 34 of which were new reports for Indiana. The number of rusts for Indiana was later updated to 155 (Jackson 1917) and 165 (Jackson 1920). Since the efforts by Jackson, various rusts and new host records have been reported as part of the sixth annual A. H. Smith Great Lakes Foray (Schoknecht 1981), as specimens evaluated in rust biogeography studies (McCain and Hennen 1981), and studies of rusts on Cyperaceae and Juncaceae in Indiana (McCain 1984). In recent years, efforts have been carried out to document all fungi in the state, including a checklist of Indiana microfungi (Bates et al. 2019). However, the taxonomy for Pucciniales in this list needs considerable revision. Despite the significant efforts to document rusts in Indiana from the past 100 years, a checklist of all Pucciniales in the state has not been compiled since the works of Jackson from 1917 to 1920. This study was undertaken to generate an updated list with a modern re-evaluation.

Checklists are vital sources of information that set a benchmark for decision-making in research efforts, resource management, and policy (Reyserhove et al. 2020). Checklists have been valuable in monitoring, modeling, and predicting species presence and distribution in diverse groups of organisms.

These include pollinators (IPBES 2016), rare species (IUCN 2020), and invasive alien species (Seebens et al. 2017; Reyserhove et al. 2020). They are instrumental in studies related to biodiversity conservation initiatives (Lowman et al. 2018; Parker et al. 2018; Menchetti et al. 2021; Lacher et al. 2022), discovery of new species (Pierson et al. 2014; Cantonwine et al. 2019; Nicolai et al. 2020; Maharani et al. 2022), and changes in response to climate change (Pearman et al. 2024). Furthermore, the use of herbarium records is highly valuable in ecological and epidemiological studies and modeling, such as assisting with the listing of rare taxa (Molano-Flores et al. 2023), providing data for biodiversity and landscape monitoring (Çelekli and Zariç 2023, informing conservation biology (Greve et al. 2016), setting baseline data particularly for poorly inventoried regions (Greve et al. 2016; Park et al. 2022), and supporting the study of phenological (Jones and Daehler 2018; Williams et al. 2021) and global environmental changes (Heberling et al. 2019; Lang et al. 2019). Access to the Arthur Fungarium, in this study, presented a valuable opportunity to assess and document the presence of rusts across Indiana with the purpose of generating a curated dataset to inform future ecological, epidemiological, and conservation work. This project verified records for potential misidentifications, known synonymies, and use of incorrect or obsolete names to reflect the most current classification for these rusts and the report of new records for the state. We provide a complete, up-to-date record of the Pucciniales species and their hosts known from Indiana.

Methods

This checklist was compiled from a variety of sources, including published literature (e.g., Arthur 1934), online databases [MyCoPortal: https://mycoportal.org/portal/collections/list.php (MyCoPortal 2025 and the U.S. National Fungus Collections database: https://nt.ars-grin.gov/fungaldatabases/ (Farr and Rossman 2018) and unpublished herbarium records. Data for the Arthur Fungarium (PUR) are maintained in the open-source software "Specify 7" by the Specify Collections Consortium (https://specifysoftware.org). Sources for each listing are provided within the list. The authors of fungal names follow the conventions in Index Fungorum (http://www.indexfungorum.org/names/AuthorsOfFungalNames.asp), and the current name of host plants follows the conventions used by the PLANTS database (http://plants.usda.gov) and Plants of the World Online (http://www.plantsoftheworldonline.org/). Herbarium specimens were studied to confirm dubious names or records, as well as for species represented by only a single statewide report.

The checklist is arranged alphabetically by genus, species, and subspecies-level taxa. Each species/subspecies is annotated with host family, species, and source of record. The current names of rust species are printed in bold type. Names not printed in bold are synonyms or other non-current names. References were inserted following the host name. The checklist does not include species that were the result of inoculation studies in greenhouses and that are not naturally occurring in the area (i.e., *Hemileia vastatrix*—PUR66308 and *Phakopsora zeae*—PUR51735).

We generated a specimen number by county list using location information from verified vouchers in the Arthur Fungarium (Suppl. material 1). Other sources of observations were not included in this analysis, since the level of detail for location varied among specimens. Metadata for records originating from PUR accessions are available in Suppl. material 2.

Maps depicting the number of observations per Indiana county were generated using map charts in Microsoft Excel version 16.88 (Microsoft Corporation, 2024). Additionally, all taxon names on the checklist were cross-checked against MycoBank and Index Fungorum by running a search for each name. Search results accuracy was categorized based on whether the correct current name was present in the search results as the current name or listed as a synonym, if an older name or another name was referenced as the current name in the database, or if a search of the current name or old name returned no results. The results from these searches are available in Suppl. material 3.

Results and discussion

Our checklist of rust fungi in Indiana includes a total of 301 current names, 339 synonyms and non-current names, and 13 ambiguous names. It documents 301 Pucciniales taxa (275 species, 21 varieties, 4 subspecies, and 1 forma specialis) distributed on 900+ host taxa. Most of the specimens from Indiana housed in the Arthur Fungarium are from Tippecanoe County (57.6%), with 2,605 out of 4,516 specimens collected in the same county where the fungarium is located. The next most sampled counties show a markedly smaller percentage, with Jasper (2.45%; 111 specimens), Montgomery (2.24%; 101 specimens), Hamilton (1.97%; 89 specimens), Putnam (1.97%; 89 specimens), Franklin (1.77%; 80 specimens), Fayette (1.64%; 74 specimens), Lawrence (1.64%; 74 specimens), and Kosciusko (1.44%; 65 specimens) counties. A total of 28% of counties (19/90) have between 20 and 53 specimens vouchered in the PUR (from highest specimen number to lowest: Porter, Marion, LaGrange, Brown, St. Joseph, Steuben, White, Warren, LaPorte, Fountain, Spencer, Lake, Carroll, Madison, Vigo, Henry, Posey, Orange, Parke, Wayne, Noble, Warrick, Marshall, Crawford, and Johnson). While another 28% of counties (19/90) have between 10 and 19 specimens accessioned per county (from highest specimen number to lowest: Jefferson, Owen, Starke, Jackson, Newton, Martin, Washington, Gibson, Clark, Harrison, Perry, Pulaski, Clinton, Knox, Monroe, Benton, Cass, Fulton, and Vanderburgh), 41% of the Indiana counties represented in the PUR collection have less than 10 specimens vouchered in the PUR per county (Fig. 1B). A detailed list of all counties and their respective number of specimens in the PUR is provided in Suppl. material 2.

The recorded distribution of rust fungi in Indiana has been attributed to the distribution of the collectors and is likely representative of changes in land use (e.g., conversion to agricultural land in a large part of the state). McCain and Hennen (1981) pointed out that over 70% of Indiana rust fungi at the time occurred within easy collecting distance of West Lafayette, where the PUR is located (e.g., Fig. 1A). The distribution data was skewed away from eastern and southern Indiana, with information at the time only for 44 of the 92 Indiana counties, evidently exemplifying the distribution of collectors rather than of taxa (McCain 1984). Although this disproportionate representation from Tippecanoe County persists—an issue that continues to this day—the PUR currently houses specimens for 90/92 counties in Indiana, only lacking representatives from Hancock and Ohio counties. This highlights the advances in Pucciniales knowledge for Indiana in the past 40+ years and the efforts to conduct fieldwork across the state. Yet, it is still clear that systematic statewide specimen collection is lacking to generate valid biogeographical or phenological hypotheses (McCain 1984).

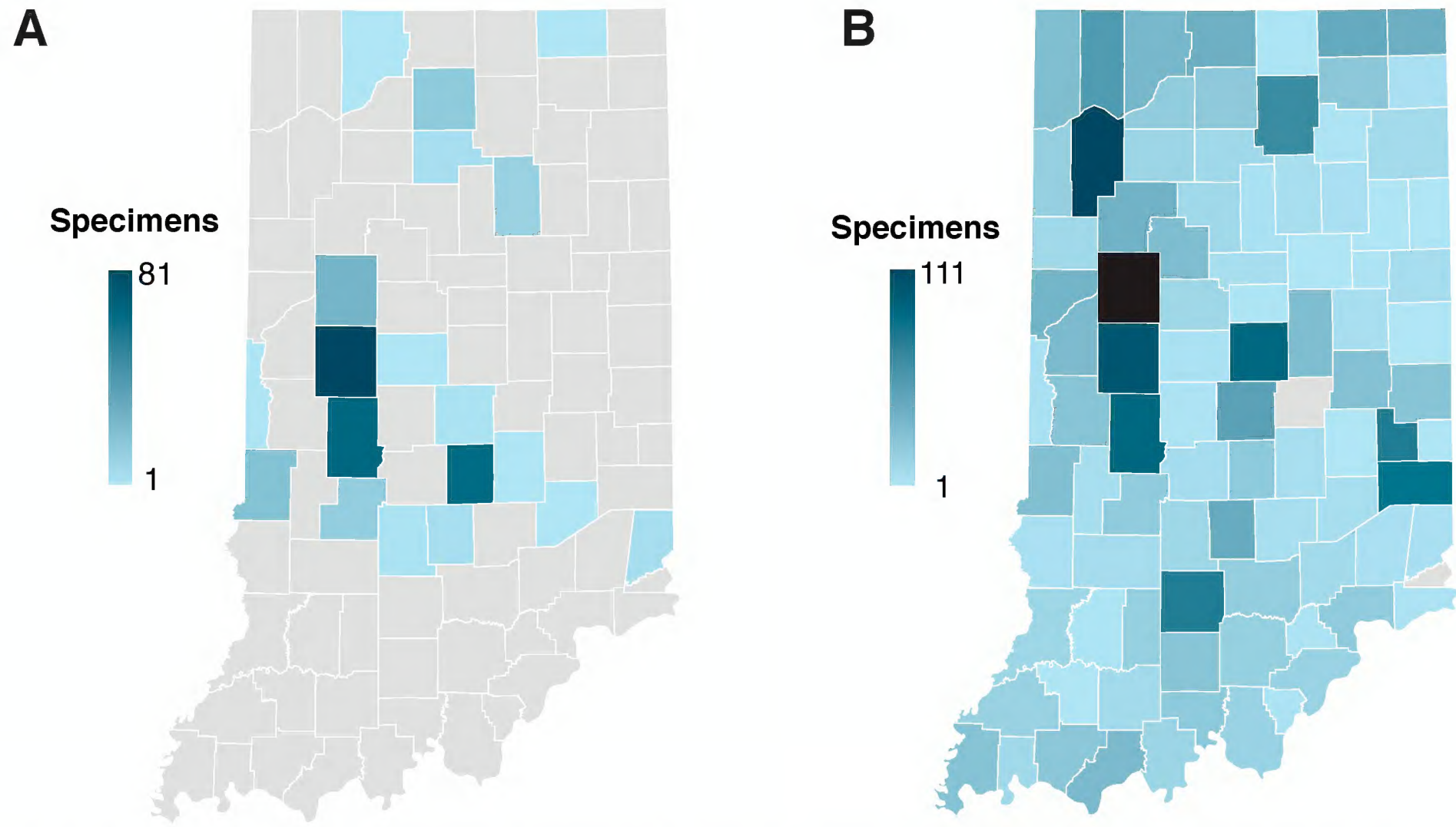

Figure 1. Distribution of specimens evaluated by Indiana counties **A** specimens studied by Underwood (1893) per Indiana county (n = 320) **B** specimens evaluated in this study accessioned in the Arthur Fungarium (PUR) collection (n = 4516; See Suppl. material 1 for detailed metadata for each specimen). Scale bars represent number of specimens studied per Indiana county. Grey color represents no rust reported for that county. Tippecanoe County (filled in black in panel B) was not included in the scale bar representation in panel B for comparison purposes between the two studies, as it was disproportionately represented with 2605 specimens. Individual maps generated with Map charts in Microsoft Excel version 16.88 (Microsoft Corporation, 2024).

Our checklist includes a total of 339 Pucciniales taxon names that had been previously reported for Indiana that are currently obsolete names, as well as 13 ambiguous taxon names. Taxonomic confusion has characterized rust fungi due to the development of multiple classification schemes, homoplasy in diagnostic characters, and the use of separate naming systems for sexual and asexual morphs under prior nomenclatural codes. Additionally, more than 200 generic names have been described in Pucciniales, but only about one-third of those names are accepted (Aime and McTaggart 2021). Taxonomy and nomenclature of many of the rusts reported in Indiana have changed over time and not always kept up to date in records. This became evident in the rusts listed in the recent checklist of Indiana microfungi (Bates et al. 2019). This study provides updated names with the most correct identification based on a re-evaluation of the dataset considering current taxonomy.

Index Fungorum (https://www.indexfungorum.org/) and MycoBank (https://www.mycobank.org/) are regularly consulted by mycologists and plant pathologists to assign current taxonomy to their rust fungi samples. Nevertheless, we note that these public name repositories may still contain inaccurate names (Suppl. material 3). Both repositories seem to follow similar patterns of accuracy/inaccuracy (Fig. 2). Of the 653 names listed on our checklist (301 current names, 339 synonyms and non-current names, and 13 ambiguous names), only 58.5% (MycoBank) and 63% (Index Fungorum) of these names directly refer to the correct name when conducting a search in each database.

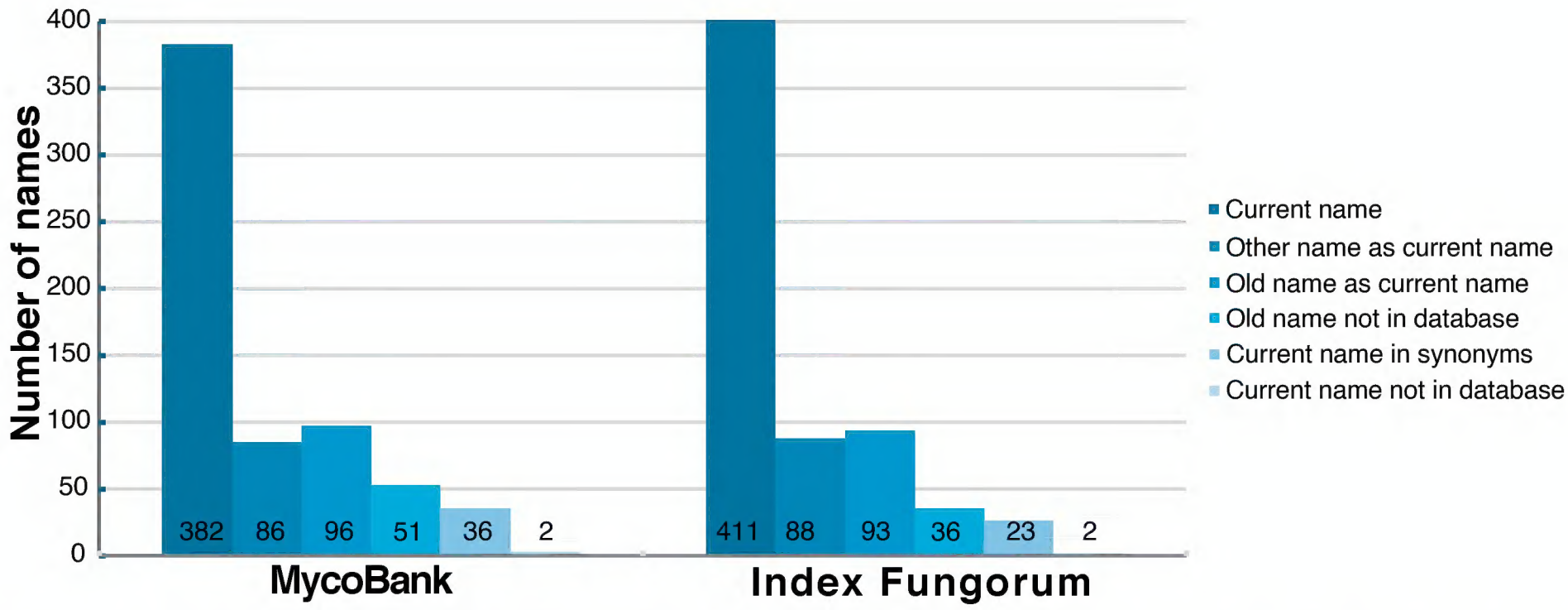

Figure 2. MycoBank and Index Fungorum taxonomic accuracy in comparison to the curated list of taxa in our Indiana rust fungi checklist (n = 653) after conducting a search for each taxon name in our list in both repositories. Search results accuracy was categorized based on whether the correct current name was present in the search results as the current name or listed as a synonym, if an older name or another name was referenced as the current name in the database, or if a search of the current name or old name returned no results.

The misidentifications and use of obsolete names are usually not congruent between the two databases. Discrepancy issues between these repositories are known and extend to disagreements in terms of placing genera to family- and order-level, based on differential updates and taxonomic opinion (Durkin et al. 2020). Our goal is that this resource, with the most up-to-date taxonomy, serves as a reference point for correct identification of rusts from Indiana to plant diagnosticians and researchers.

Indiana checklist of rust fungi (Pucciniales)

In this checklist, 301 rust taxa from Indiana are reported. A list of host species, taxonomic/nomenclatural synonyms of each rust taxon, and references are also included.

Aecidium albiperidium Arthur

See: *Puccinia caricina* DC., s.lat.

Aecidium aquilegiae Pers.

See: *Puccinia persistens* Plowr. s.lat.

Aecidium asperifolii Pers.

See: *Puccinia recondita* Roberge ex Desm.

Aecidium asterum Schwein.

See: *Puccinia dioicae* Magnus, s.lat.

Aecidium berberidis Pers.

See: *Puccinia graminis* Pers.

***Aecidium boehmeriae* Arthur**

Boehmeria cylindrica (L.) Sw. (Urticaceae) (Jackson 1915; Anderson and Anderson 1919; USDA 1960) PUR: 42992

***Aecidium compositarum* Mart.**

Eupatorium perfoliatum L. (Asteraceae) (Snyder 1896)

Note: Probably aecial state of *Puccinia eleocharidis* Arthur.

***Aecidium cyparissiae* DC.**

Euphorbia commutata Engelm. ex A. Gray (Euphorbiaceae) (Underwood 1896)

Note: Probably refers to *Aecidium tithymali* Arthur.

***Aecidium dakotense* Griffiths**

Thalictrum dioicum L. (Ranunculaceae) (Jackson 1920) PUR: 6760

Aecidium dicentrae Trel.

See: *Aplopsora dicentrae* (Mains & H.W. Anderson) Buriticá & J.F. Hennen

Aecidium dracontii Schwein. [as '*dracontinatum*' in protologue]

See: *Uromyces ari-triphylli* (Schwein.) Seeler

Aecidium erigeronatum Schwein.

See: *Puccinia dioicae* Magnus, s.lat.

Aecidium eupatorii Dietel

See: *Puccinia eleocharidis* Arthur

Aecidium euphorbiae Pers. ex J.F. Gmel.

See: *Uromyces proëminens* (DC.) Lév.

Aecidium geranii DC.

See: *Uromyces geranii* (DC.) Lév.

Aecidium grossulariae (J.F. Gmel.) DC.

See: *Puccinia caricina* DC., s.lat.

Aecidium hepaticatum Schwein.

See: *Tranzschelia arthurii* Tranzschel & M.A. Litv.

Aecidium hydnoideum Berk. & M.A. Curtis

See: *Puccinia dioicae* Magnus, s.lat.

Aecidium impatientis Schwein.

See: *Puccinia impatientis* (Schwein.) Arthur

Aecidium lycopi W.R. Gerard

See: *Puccinia angustata* Peck

Aecidium mariae-wilsoniae Peck [as '*mariae-wilsoni*']

See: *Puccinia ellisiana* Thüm.

Aecidium oenotherae Peck

See: *Puccinia dioicae* Magnus, s.lat.

Aecidium onobrychidis Burrill

See: *Puccinia andropogonis* Schwein.

Aecidium pedatatum Schwein

See: *Uromyces andropogonis* Tracy

Aecidium pentastemonis Schwein.

See: *Puccinia andropogonis* Schwein.

Aecidium physalidis Burrill

See: *Puccinia kansensis* Ellis & Barthol.

Aecidium pteleae Berk. & M.A. Curtis

See: *Puccinia windsoriae* Schwein.

Aecidium pustulatum M.A. Curtis

See: *Puccinia andropogonis* Schwein.

Aecidium ranunculacearum DC.

Anemone pensylvanica L. (Ranunculaceae) (Snyder 1896)

Notes: *A. ranunculacearum* is an ambiguous name and may refer to *Puccinia magnusiana*, *P. recondita*, or *Uromyces dactylidis*.

Aecidium ranunculi Schwein.

See: *Puccinia eatoniae* Arthur

Aecidium sambuci Schwein.

See: *Puccinia sambuci* (Schwein.) Arthur

***Aecidium tithymali* Arthur**

Euphorbia commutata Engelm. ex A. Gray (=*Tithymalus commutatus* (Engelm. ex A. Gray) Klotzsch & Garcke (Euphorbiaceae) (Jackson 1917; Arthur 1918; Anderson and Anderson 1919; USDA 1960) PUR: 43105, 43110, 43111, 43112, 43113, 43114, 47301, N6674.

Aecidium trillii Burrill

See: *Uromyces halstedii* De Toni

Aecidium verbenicola Ellis & Kellerm. (Also reported as *Aecidium verbenae* Speg. [author as 'Spreng.']

See: *Puccinia vilfae* Arthur & Holw.

Allodus ambigua (Alb. & Schwein.) Arthur

See: *Puccinia difformis* Kunze

Allodus claytoniata (Schwein.) Arthur

See: *Puccinia mariae-wilsoniae* G.W. Clinton

***Allodus podophylli* (Schwein.) Arthur**

Podophyllum peltatum L. (Berberidaceae) (Underwood 1893; Snyder 1896, 1898; Arthur 1899; Jackson 1915; Anderson and Anderson 1919) PUR: 35717, 35720, 35721, 35727, 35731, 35732, 35733, 35734, 35735, 35736, 35737, 35741, 35742, 35743, 35744, 35750, 35751, 35753, 35754, 35756, 35764, 35767, 35768, 35770, 35771, 35773, 35777, 35780, 35781, 35794, 35795, 35796, 35797, 35803, 35804, 35805, 35807, 35812, 35813, 35814, 35816, 35818, 46794, 46795, 46810, 65820, 88839, 89279, N617, N2151, N2152, N2153, N4516, N4530, N4668, N5872, N5873, N5874, N5875, N5876, N5877, N5878

Host not reported (Van Hook 1910)

Allodus tenuis (Schwein.) Arthur

See: *Puccinia tenuis* Burrill

***Aplopsora dicentrae* (Mains & H.W. Anderson) Buriticá & J.F. Hennen**

Dicentra cucullaria (L.) Bernh. (Fumariaceae) (Underwood 1893; Anderson and Anderson 1919; Buriticá 1998); (=*Bicuculla cucullaria* (L.) Millsp.) (Jackson 1917)

Laportea canadensis (L.) Weddell (Urticaceae) (Buriticá 1998)

***Aplopsora tanakae* (S. Ito) Buriticá & J.F. Hennen**

Amphicarpaea bracteata (L.) Fernald (Fabaceae) (Emmons et al. 1960; Cummins 1962; Cooke 1975; Buriticá 1998)

Aregma disciflora (Tode) Arthur

See: *Phragmidium mucronatum* (Pers.) Schltdl.

Aregma fragariae (DC.) Arthur

See: *Phragmidium tormentillae* Fuckel

Aregma speciosum Fr. [as 'speciosa']

See: *Phragmidium speciosum* (Fr.) Cooke

***Bubakia crotonis* (Cooke) Arthur**

Croton monanthogynus Michx. (Euphorbiaceae) (Jackson 1915)

Croton sp. PUR: N2586

Bullaria bardanae (Corda) Arthur

See: *Puccinia bardanae* (Wallr.) Corda

Bullaria bullata (Pers.) Arthur

See: *Puccinia angelicae* (Schumach.) Fuckel

Bullaria chrysanthemi (Roze) Arthur
See: *Puccinia tanaceti* var. *tanaceti* DC.
Bullaria globosipes (Peck) H.S. Jacks.
See: *Puccinia globosipes* Peck
Bullaria hieracii (Schumach.) Arthur
See: *Puccinia hieracii* (Röhl.) H. Mart.
Bullaria kuhniae (Schwein.) Kern
See: *Puccinia kuhniae* Schwein.
Bullaria kuhniae (Schwein.) H.S. Jacks. (nomen invalidum)
See: *Puccinia kuhniae* Schwein.
Bullaria taraxaci Arthur
See: *Puccinia hieracii* (Röhl.) H. Mart.
Caeoma agrimoniae Schwein.
See: *Pucciniastrum agrimoniae* (Dietel) Tranzschel
Caeoma nitens Schwein.
See: *Gymnoconia nitens* (Schwein.) Arthur
Caeomurus caladii (Schwein.) Kuntze
See: *Uromyces ari-triphylli* (Schwein.) Seeler
Caeomurus caryophyllinus (Schrank) Kuntze
See: *Uromyces dianthi* (Pers.) Niessl
Caeomurus euphorbiae (Cooke & Peck) Kuntze
See: *Uromyces proëminens* (DC.) Lév.
Caeomurus gaurinus (Peck) Arthur
See: *Uromyces plumbarius* Peck
Caeomurus graminicola (Burrill) Kuntze [as '*graminicolus*']
See: *Puccinia graminicola* (Burrill) Demers & Castl.
Caeomurus howei (Peck) Kuntze
See: *Uromyces asclepiadis* Cooke
Caeomurus hedysari-paniculati (Schwein.) Arthur
See: *Uromyces hedysari-paniculati* (Schwein.) Farl.
Caeomurus hyperici-frondosi (Schwein.) Arthur
See: *Uromyces triquetrus* Cooke
Caeomurus junci (Tul. & C. Tul.) Kuntze
See: *Uromyces junci* (Desm.) Tul. & C. Tul.
Caeomurus lespedezae-procumbentis (Schwein.) Arthur
See: *Uromyces lespedezae-procumbentis* (Schwein.) M.A. Curtis
Caeomurus peryginus (Halst.) Kuntze [as '*perigynius*']
See: *Uromyces perigynius* Halst.
Caeomurus phaseoli (Pers.) Arthur
See: *Uromyces appendiculatus* var. *appendiculatus* (Pers.) Unger
Caeomurus pisi (Pers.) Gray
This is an illegitimate name (Art. 53.1)
See: *Uromyces viciae-fabae* (Pers.) J. Schröt.
Caeomurus polygoni (Pers.) Kuntze
See: *Uromyces polygoni-avicularis* (Pers.) G.H. Otth
Caeomurus rudbeckiae (Arthur & Holw.) Kuntze
See: *Uromyces rudbeckiae* Arthur & Holw
Caeomurus terebinthi (DC.) Kuntze
See: *Pileolaria brevipes* Berk. & Ravenel

Caeomurus trifolii (R. Hedw.) Gray, nom. ambig.
See: *Uromyces trifolii*; *U. trifolii-repentis* var. *trifolii-repentis* and *U. trifolii-repentis* var. *fallens*
Trifolium medium L. (Fabaceae) (Arthur 1899) [Doubtful record]
***Calyptospora columnaris* (Alb. & Schwein.) J.G. Kühn**
Abies balsamea (L.) Mill. (Pinaceae)
Cerotelium tanakae S. Ito
See: *Aplopsora tanakae* (S. Ito) Buriticá & J.F. Hennen
Chrysomyxa albida J.G. Kühn
See: *Kuehneola uredinis* (Link) Arthur
***Chrysomyxa ledicola* (Peck) Lagerh.**
Picea mariana (Mill.) Britton, Sterns & Poggenb. (Pinaceae) PUR: 4729
***Coleosporium apocynaceum* Cooke**
Amsonia cv. 'Blue Ice' (Apocynaceae) (Abbasi et al. 2016a)
***Coleosporium asterum* (Dietel) Syd. & P. Syd.**
Aster salicifolius Lam. (Asteraceae) (Jackson 1915)
A. shortii Hook (Jackson 1915)
Callistephus chinensis (L.) Nees (=*Callistephus hortensis* Cass.) (Asteraceae)
C. hortensis Cass. (Jackson 1915; Pipal 1915; Anderson and Anderson 1919)
Pinus echinata Mill. (Pinaceae)
Pinus sp.
P. taeda L.
Solidago altissima L. (Asteraceae) (Anderson and Anderson 1919; Emmons et al. 1960; Schoknecht 1981)
S. arguta Aiton (Underwood 1893; Arthur 1899; Jackson 1915; Anderson and Anderson 1919)
S. bicolor L. (Anderson and Anderson 1919; Jackson 1920)
S. caesia L. (Underwood 1893; Arthur 1899; Jackson 1915; Anderson and Anderson 1919; Emmons et al. 1960; Schoknecht 1981)
S. canadensis (cf.) L. (Arthur 1899; Anderson and Anderson 1919)
S. canadensis L. (Underwood 1893; Jackson 1915)
S. erecta Pursh (Jackson 1920)
S. flexicaulis L. (Arthur 1899; Jackson 1915); (=*S. latifolia* L.) (Underwood 1893; Anderson and Anderson 1919)
S. gigantea Aiton (=*S. gigantea* subsp. *serotina* (Kuntze) McNeill) (McCain et al. 1990); (=*S. serotina* Aiton) (Underwood 1893; Arthur 1899; Jackson 1915)
S. juncea Aiton (Jackson 1920; Cooke 1967)
S. nemoralis Aiton (McCain et al. 1990)
S. patula Muhl. ex Willd. (Underwood 1893; Arthur 1899; Jackson 1915; Anderson and Anderson 1919)
S. rugosa Mill. (Underwood 1893; Arthur 1899; Jackson 1915)
Solidago sp. (Snyder 1896)
S. uliginosa Nutt.
S. ulmifolia Muhl. ex Willd. (Jackson 1915; Anderson and Anderson 1919; Emmons et al. 1960)
Symphyotrichum cordifolium (L.) G.L. Nesom (=*Aster cordifolius* L. and *A. sagittifolius* Wedemeyer ex Willd.) (Asteraceae) (Underwood 1893; Arthur 1899; Jackson 1915; Anderson and Anderson 1919)

S. drummondii (Lindl.) G.L. Nesom; var. *drummondii (Lindl.)* G.L. Nesom (=*A. drummondii* Lindl.) (Jackson 1915)
S. ericoides (L.) G.L. Nesom; var. *ericoides* (=*A. ericoides* L.) (Jackson 1915; Anderson and Anderson 1919)
S. laeve (L.) A. Löve & D. Löve
S. lanceolatum (Willd.) G.L. Nesom; ssp. *lanceolatum* var. *lanceolatum* (=*A. paniculatus* Lam.) (Underwood 1893; Arthur 1899; Jackson 1915; Anderson and Anderson 1919)
S. lateriflorum (L.) A. Löve & D. Löve
S. novae-angliae (L.) G.L. Nesom; (=*A. novae-angliae* L.) (Underwood 1893; Arthur 1899; Jackson 1915; Anderson and Anderson 1919)
S. novi-belgii (L.) G.L. Nesom var. *novi-belgii* (=*A. longifolius* Lam.) (Jackson 1915)
S. oolentangiense (Riddell) G.L. Nesom var. *oolentangiense* (=*A. azureus* Lindl.) (Underwood 1893; Arthur 1899; Jackson 1915; Anderson and Anderson 1919)
S. pilosum var. *pilosum* (Willd.) G.L. Nesom (=*A. pilosus* Willd.)
S. praealtum (Poir.) G.L. Nesom (=*A. salicifolius* Aiton) (Underwood 1893); var. *praealtum* (Poir.) G.L. Nesom (=*A. praealtus* Poir.) (McCain et al. 1990)
S. puniceum (L.) Á. Löve & D. Löve; var. *puniceum* (L.) Á. Löve & D. Löve (=*A. firmus* Nees) (McCain et al. 1990); (=*A. puniceus* L.) (Underwood 1893; Arthur 1899; Jackson 1915); (=*S. firmum* (Nees) G.L. Nesom)
S. shortii (Lindl.) G.L. Nesom (=*A. shortii* Lindl.) (Underwood 1893; Anderson and Anderson 1919)
Symphyotrichum sp. (=*Aster* sp.) (Snyder 1898)
S. tradescantii (L.) G.L. Nesom (=*A. tradescantii* L.) (Underwood 1893; Arthur 1899; Jackson 1915)

***Coleosporium campanulae* (Pers.) Tul.**

Campanula rapunculoides L. (Campanulaceae) (McCain and Hennen 1981; McCain et al. 1990)
Campanulastrum americanum (L.) Small (=*Campanula americana* L.) (Campanulaceae) (Jackson 1915; Anderson and Anderson 1919; Cooke 1967)

***Coleosporium delicatulum* (Arthur & F. Kern) Hedgc. & Long**

Euthamia graminifolia (L.) Nutt. (Asteraceae) (Jackson 1915); var. *graminifolia* (L.) Nutt. (=*Solidago graminifolia* (L.) Salisb.) (Emmons et al. 1960)
Solidago lanceolata L. (Asteraceae) (Anderson and Anderson 1919)

***Coleosporium elephantopi* Thüm. [as '*elephantopodis*']**

Elephantopus carolinianus Willd. (Asteraceae) (Jackson 1915)

***Coleosporium helianthi* (Schweinitz) Arthur**

Helianthus decapetalus L. (Asteraceae) (Jackson 1915)
H. microcephalus Torr. & A. Gray (McCain et al. 1990)
H. giganteus L. (USDA 1960)
H. hirsutus Raf. (Jackson 1915)
Silphium integrifolium Michx. (Asteraceae) (Jackson 1915)
S. perfoliatum L.
S. terebinthinaceum Jacq. (Jackson 1915)

Coleosporium hydrangeae (Berk. & M.A. Curtis) L. Snyder

See: *Pucciniastrum hydrangeae* (Magnus) Arthur

***Coleosporium ipomoeae* (Schwein.) Burrill**

Ipomoea pandurata (L.) G. Mey. (Convolvulaceae) (Underwood 1896; Arthur 1899; Jackson 1915; Anderson and Anderson 1919)

Ipomoea sp. (Snyder 1896)

***Coleosporium montanum* (Arthur & F. Kern) McTaggart & Aime**

Solidago sp. (Asteraceae) (McTaggart and Aime 2018) PUR: N11689, N21953

***Coleosporium pinicola* (Arthur) Arthur**

Pinus virginiana Mill. (Pinaceae) (USDA 1960)

Coleosporium rubi Ellis & Holw.

See: *Kuehneola uredinis* (Link) Arthur

***Coleosporium solidaginis* (Schwein.) Thüm.**

Solidago canadensis (Asteraceae) PUR: N23076, N23056

Coleosporium sonchi-arvensis (Pers.) Lév.

Hieracium sp. (Asteraceae) (Underwood 1893) [Doubtful record]

See: *Coleosporium asterum* (Dietel) Syd. & P. Syd. and *C. vernoniae* Berk. & M.A. Curtis

Coleosporium terebinthinaceae (Schwein.) Arthur

See: *Coleosporium helianthi* (Schweinitz) Arthur

***Coleosporium tussilaginis* (Pers.) Lév.**

Packera aurea (L.) Á. Löve & D. Löve (=*Senecio aureus* L.) (Asteraceae) (McCain et al. 1990)

Senecio sp. (Asteraceae) PUR: 89361

***Coleosporium vernoniae* Berk. & M.A. Curtis**

Elephantopus carolinianus Raeusch. (Asteraceae)

Pinus echinata Mill. (Pinaceae)

P. nigra Arnold (USDA 1960)

P. rigida Mill.

P. virginiana Mill.

Vernonia arkansana DC. (Asteraceae)

V. fasciculata Michx. (Underwood 1893; Arthur 1899; Jackson 1915; Anderson and Anderson 1919)

V. gigantea (Walter) Trel. ; subsp. *gigantea* (=*V. altissima* Nutt.) (Jackson 1915; Anderson and Anderson 1919; Emmons et al. 1960; Schoknecht 1981)

Vernonia × illinoensis Gleason [*gigantea* × *missurica*] (Jackson 1920)

V. missurica Raf.

V. noveboracensis (L.) Michx. (Underwood 1893; Arthur 1899; Jackson 1915; Van Hook 1927)

Vernonia sp. (Cooke 1967)

***Coleosporium viburni* Arthur**

Viburnum lentago L. (Caprifoliaceae)

Viburnum sp. (Ruhl et al. 1982)

***Coleosporium* sp.**

Pinus sp. (Pinaceae) (Ruhl et al. 1983)

***Cronartium comandrae* Peck**

Comandra umbellata (L.) Nutt. (Santalaceae)

***Cronartium fusiforme* Hedgc. & N.R. Hunt ex Cummins**

Pinus sp. (Pinaceae) (Ruhl et al. 1982)

***Cronartium harknessii* E. Meinecke**

Pinus sp. (Pinaceae) (Ruhl et al. 1983)

***Cronartium quercuum* (Berk.) Miyabe ex Shirai**

Quercus alba L. (Fagaceae)

Q. bicolor Willd.

Q. macrocarpa Michx.

Q. michauxii Nutt.

Q. muehlenbergii Engelm.

Q. pagoda Raf.

Q. phellos L.

Q. rubra L.

***Cronartium ribicola* J.C. Fisch.**

Ribes cynosbati L. (Grossulariaceae) (Emmons et al. 1960)

Ribes sp.

R. aureum var. *villosum* DC. (=*R. odoratum* H.L. Wendl.) (Wilson et al. 2014)

Dasyspora anemones-virginianae (Schwein.) Arthur

See: *Puccinia anemones-virginianae* Schwein.

Dasyspora asteris (Duby) Arthur

See: *Puccinia cnici-oleracei* Pers. ex Desm.

Dasyspora circaeae (Pers.) Arthur

See: *Puccinia circaeae* Pers.

Dasyspora dayi (Clinton) Arthur

See: *Puccinia dayi* Clinton

Dasyspora glechomatis (DC.) Arthur [as *gleocomatis*]

See: *Puccinia glechomatis* DC.

Dasyspora lobeliae (W.R. Gerard) Arthur

See: *Puccinia lobeliae* W.R. Gerard

Dasyspora malvacearum (Bertero) Arthur

See: *Puccinia malvacearum* Bertero ex Mont.

Dasyspora physostegiae (Peck & Clinton) H.S. Jacks.

See: *Puccinia physostegiae* Peck & Clinton

Dasyspora ranunculi (Kuntze) Arthur

See: *Puccinia andina* Dietel & Neger

Dasyspora saxifragae (Schltdl.) Arthur

See: *Puccinia heucherae* (Schwein.) Dietel

Dasyspora seymeriae (Burrill) Arthur [as '*seymouriae*' by Arthur (1906)]

See: *Puccinia seymeriae* Burrill

Dasyspora silphii (Schwein.) Arthur

See: *Puccinia silphii* Schwein.

Dasyspora xanthii (Schwein.) Arthur

See: *Puccinia xanthii* Schwein.

Dicaeoma aletridis (Berk. & M.A. Curtis) Kuntze

See: *Puccinia aletridis* Berk. & M.A. Curtis

Dicaeoma andropogi (Schwein.) Kuntze

See: *Puccinia andropogonis* Schwein.

Dicaeoma andropogonis (Schwein.) Kuntze

See: *Puccinia andropogonis* Schwein.

Dicaeoma anemones (Pers.) Arthur

See: *Tranzschelia pseudofusca* M. Scholler & M. Abbasi

Dicaeoma anemones-virginianae (Schwein.) Arthur

See: *Puccinia anemones-virginianae* Schwein.

Dicaeoma angustatum (Peck) Kuntze
See: *Puccinia angustata* Peck
Dicaeoma antirrhini (Dietel & Holw.) H.S. Jacks.
See: *Puccinia antirrhini* Dietel & Holw.
Dicaeoma apocryptum (Ellis & Tracy) Kuntze
See: *Puccinia apocrypta* Ellis & Tracy
Dicaeoma argentatum (Schultz) Kuntze
See: *Puccinia argentata* (Schultz) G. Winter
Dicaeoma asparagi (DC.) Kuntze
See: *Puccinia asparagi* DC.
Dicaeoma asperifolii (Pers.) Kuntze
See: *Puccinia recondita* Roberge ex Desm. s.str.
Dicaeoma asperifolii (Pers.) Kuntze, sensu Arthur (1899), nom. ambig.
See: *Puccinia impatientis* (Schwein.) Arthur and *P. recondita* Roberge ex Desm. s.str.
Avena sativa L (Poaceae) (Arthur 1899) [Doubtful record]
Dicaeoma asteris (Duby) Kuntze
See: *Puccinia cnici-oleracei* Pers. ex Desm.
Dicaeoma bolleyanum (Sacc.) Kuntze
See: *Puccinia sambuci* (Schwein.) Arthur
Dicaeoma calthae (Link) Kuntze
See: *Puccinia calthae* Link
Dicaeoma canaliculatum (Schwein.) Kuntze
See: *Puccinia canaliculata* (Schwein.) Lagerh.
Dicaeoma cephalanthi (Seym.) H.S. Jacks.
See: *Puccinia seymouriana* Arthur
Dicaeoma circaeae (Pers.) Kuntze
See: *Puccinia circaeae* Pers.
Dicaeoma cnici H. (Mart.) Arthur
See: *Puccinia cnici* H. Mart.
Dicaeoma clematidis (DC.) Arthur, nom. ambig.
This is an ambiguous name applied by different authors to different taxa.
Aquilegia sp. (Ranunculaceae) (Jackson 1915)
Clematis virginiana L. (Ranunculaceae) (Jackson 1915)
Thalictrum thalictroides (L.) Eames & B. Boivin (=*Syndesmon thalictroides* (L.) Hoffmanns. ex Britton (Ranunculaceae) (Jackson 1915)
Elymus repens (L.) Gould (=*Agropyron repens* (L.) P. Beauv.) (Poaceae) (Jackson 1915)
Bromus ciliatus L. (Poaceae) (Jackson 1915)
B. arvensis L. (=*Bromus japonicus* Thunb.) (Jackson 1915)
B. ciliatus var. *purgans* (L.) A. Gray (=*B. purgans* L.) (Jackson 1915)
B. secalinus L. (Jackson 1915)
Hordeum jubatum L. (Poaceae) (Jackson 1915)
Glyceria grandis S. Watson var. *grandis* (=*Panicularia grandis* (S. Watson) Nash (Poaceae) (Jackson 1915)
Dicaeoma conoclinii (Seym.) Kuntze
See: *Puccinia conoclinii* Seym. ex Burrill
Dicaeoma convolvuli (Pers.) Kuntze
See: *Puccinia convolvuli* (Pers.) Castagne

Dicaeoma cyperi (Arthur) Kuntze
See: *Puccinia cyperi* Arthur
Dicaeoma cypripedii (Arthur) Arthur
See: *Puccinia cypripedii* Arthur
Dicaeoma dayi (Clinton) Kuntze
See: *Puccinia dayi* Clinton
Dicaeoma dochmia (Berk. & M.A. Curtis) Kuntze
See: *Puccinia dochmia* Berk. & M.A. Curtis
Dicaeoma eatoniae Arthur
See: *Puccinia eatoniae* Arthur
Dicaeoma eleocharidis (Arthur) Kuntze
See: *Puccinia eleocharidis* Arthur
Dicaeoma ellisianum (Thüm.) Kuntze
See: *Puccinia ellisiana* Thüm.
Dicaeoma emaculatum (Schwein.) Kuntze
See: *Puccinia emaculata* Schwein.
Dicaeoma epiphyllum (L.) Kuntze
See: *Puccinia poarum* Nielsen
[Jackson's (1920) report on *Alopecurus geniculatus* L. is *Puccinia poae-nemoralis* G.H. Otth]
Dicaeoma eriophori (Thüm.) Kuntze
See: *Puccinia eriophori* Thüm.
Dicaeoma extensicola (Plowr.) Kuntze
See: *Puccinia dioicae* Magnus. s.lat.
Dicaeoma flosculosorum (Alb. & Schwein.) H. Mart.
See: *Puccinia hieracii* (Röhl.) H. Mart.
Dicaeoma fraxini (Schwein.) Arthur
See: *Puccinia sparganioides* Ellis & Barthol.
Dicaeoma galiorum (Link) Arthur, nom. ambig.
See: *Puccinia punctata* Link; *P. punctata* var. *troglodytes* (Lindr.) Arthur and *P. difformis* Kunze
Dicaeoma grossulariae (Schumach.) H.S. Jacks.
See: *Puccinia caricina* DC., s.lat.
Dicaeoma helianthii (Schwein.) Kuntze
See: *Puccinia helianthi* Schwein.
Dicaeoma heliopsidis (Schwein.) Kuntze
See: *Puccinia helianthi* Schwein.
Dicaeoma hibisciatum (Schwein.) Arthur
See: *Puccinia schedonnardi* Kellerm. & Swingle
Dicaeoma impatientis (Schwein.) Arthur
See: *Puccinia impatientis* (Schwein.) Arthur
Dicaeoma iridis (DC.) Kuntze
See: *Puccinia iridis* Wallr.
Dicaeoma kuhniae (Schwein.) Kuntze
See: *Puccinia kuhniae* Schwein.
Dicaeoma lateripes (Berk. & Ravenel) Kuntze
See: *Puccinia lateripes* Berk. & Ravenel
Dicaeoma lobeliae (W.R. Gerard) Arthur
See: *Puccinia lobeliae* W.R. Gerard

Dicaeoma ludibundum (Ellis & Everh.) Kuntze
See: *Puccinia dioicae* Magnus, s.lat.
Dicaeoma majanthae (Schumach.) Arthur
See: *Puccinia sessilis* J. Schröt.
Dicaeoma melicae (P. Syd. & Syd.) Arthur
See: *Puccinia melicae* P. Syd. & Syd.
Dicaeoma menthae (Pers.) Gray
See: *Puccinia menthae* Pers.
Dicaeoma minutissimum (Arthur) H.S. Jacks.
See: *Puccinia minutissima* Arthur
Dicaeoma montanense (Ellis) Kuntze
See: *Puccinia montanensis* Ellis
Dicaeoma obscurum (J. Schröt.) Kuntze
See: *Puccinia obscura* J. Schröt.
Dicaeoma obtectum (Peck) Kuntze
See: *Puccinia obtecta* Peck
Dicaeoma orbicula (Peck & Clinton) Kuntze
See: *Puccinia orbicula* Peck & Clinton
Dicaeoma pammelii (Trel.) Arthur
See: *Puccinia emaculata* Schwein.
Dicaeoma patruelis (Arthur) H.S. Jacks.
See: *Puccinia dioicae* Magnus, s.lat.
Dicaeoma peckii (De Toni) Arthur
See: *Puccinia dioicae* Magnus, s.lat.
Dicaeoma physostegiae (Peck & Clinton) Kuntze
See: *Puccinia physostegiae* Peck & Clinton
Dicaeoma poculiforme (Jacq.) Kuntze
See: *Puccinia graminis* Pers.
Dicaeoma podophylli (Schwein.) Kuntze
See: *Allodus podophylli* (Schwein.) Arthur
Dicaeoma polygoni-amphibii (Pers.) Arthur
See: *Puccinia polygoni-amphibii* Pers.
Dicaeoma polygoni-convolvuli (Hedw.) Arthur
See: *Puccinia polygoni-amphibii* Pers.
Dicaeoma prenanthis (Pers.) Kuntze
See: *Puccinia orbicula* Peck & Clinton
Dicaeoma punctatum (Link) Arthur
See: *Puccinia punctata* Link and *P. punctata* var. *troglodytes* (Lindr.) Arthur
Dicaeoma pustulatum (M.A. Curtis) Arthur
See: *Puccinia andropogonis* Schwein.
Dicaeoma ranunculi (Seym.) Kuntze
See: *Puccinia andina* Dietel & Neger
Dicaeoma rhamni (J.F. Gmel.) Kuntze, nom. ambig.
See: *Puccinia coronata* Corda, s.lat., *P. coronata* var. *avenae* f. sp. *avenae* Urban & Marková and *P. coronati-calamagrostidis* M. Liu & Hambl.
Dicaeoma ruelleae (Berk. & Broome) Kuntze
See: *Puccinia lateripes* Berk. & Ravenel
Dicaeoma sambuci (Schwein.) Arthur
See: *Puccinia sambuci* (Schwein.) Arthur

Dicaeoma saniculae (Grev.) Kuntze
See: *Puccinia marylandica* Lindr.
Dicaeoma silphii (Schwein.) Kuntze
See: *Puccinia silphii* Schwein.
Dicaeoma smilacis (Schwein.) Kuntze
See: *Puccinia smilacis* Schwein.
Dicaeoma sorghi (Schwein.) Kuntze
See: *Puccinia sorghi* Schwein.
Dicaeoma tenue (Schwein.) Kuntze
See: *Puccinia tenuis* Burrill
Dicaeoma thalictri (Chevall.) Kuntze
See: *Tranzschelia thalictri* (Chev.) Dietel
Dicaeoma triticinum (Erikss.) H.S. Jacks.
See: *Puccinia persistens* subsp. *triticina* (Erikss.) Z. Urb. & J. Marková
Dicaeoma troglodytes (Lindr.) H.S. Jacks.
See: *Puccinia punctata* var. *troglodytes* (Lindr.) Arthur
Dicaeoma urticae (Schumach.) Kuntze
This name as applied by Arthur (1899) is ambiguous and probably refers to *Puccinia urticata*
See: *Puccinia urticata* F. Kern
Dicaeoma verbenicola (Ellis & Kellerm.) Arthur [reported as '*verbenicolum*']
See: *Puccinia vilfae* Arthur & Holw.
Dicaeoma vernoniae (Schwein.) Kuntze (reported by Jackson 1915, but this combination was never made by Kuntze)
See: *Puccinia longipes* Lagerh.
Dicaeoma vexans (Farl.) Kuntze
See: *Puccinia vexans* Farl.
Dicaeoma vilfae (Arthur & Holw.) Arthur
See: *Puccinia vilfae* Arthur & Holw.
Dicaeoma violae (Schumach.) Kuntze
See: *Puccinia violae* (Schumach.) DC.
Dicaeoma vulpinodis (Dietel & Holw.) Kuntze
See: *Puccinia dioicae* Magnus, s.lat.
Dicaeoma windsoriae (Schwein.) Kuntze
See: *Puccinia windsoriae* Schwein.
Dicaeoma xanthii (Schwein.) Kuntze
See: *Puccinia xanthii* Schwein.
Diorchidium lateripes Magnus
See: *Puccinia lateripes* var. *strepentis* G.F. Laundon
Earlea speciosa (Fr.) Arthur
See: *Phragmidium speciosum* (Fr.) Bonard
Endocronartium harknessii (J.P. Moore) Y. Hirats.
See: *Cronartium harknessii* E. Meinecke
Endophyllum tuberculatum (Ellis & Kellerm.) Arthur & Fromme
See: *Pucciniosira tuberculata* (Ellis & Kellerm.) Buriticá & J.F. Hennen
Frommea obtusa (F. Strauss) Arthur
See: *Phragmidium tormentillae* Fuckel
Frommeëlla duchesneae (Arthur) Yohem, Cummins & Gilb.
See: *Phragmidium mexicanum* (Mains) H.Y. Yun, Minnis & Aime

Frommeëlla mexicana var. *indicae* J.W. McCain & J.F. Hennen

See: *Phragmidium mexicanum* (Mains) H.Y. Yun, Minnis & Aime

Frommeëlla tormentillae (Fuckel) Cummins & Y. Hirats.

See: *Phragmidium tormentillae* Fuckel

Gymnoconia interstitialis (Schltdl.) Lagerh.

See: *Gymnoconia peckiana* (Howe) Trotter

***Gymnoconia nitens* (Schwein.) Arthur**

Rubus allegheniensis cf. Porter

R. allegheniensis Porter (Rosaceae) (Jackson 1920)

R. argutus var. *floridus* (Tratt.) L.H. Bailey

R. flagellaris cf. Willd.

R. flagellaris Willd.; (=*R. villosus* Aiton) (Snyder 1898); (=*R. procumbens* Muhl.) (Jackson 1920)

R. frondosus Bigelow (=*R. sativus* Brainerd) (Jackson 1920)

R. hispidus L.

R. occidentalis L. (Jackson 1920)

Rubus sp.

Host not reported (Van Hook 1910)

***Gymnoconia peckiana* (Howe) Trotter**

Rubus allegheniensis Porter (Rosaceae) (Jackson 1915; Anderson and Anderson 1919; Emmons et al. 1960)

R. flagellaris Willd. (=*R. procumbens* Muhl.) (Jackson 1915); (=*R. villosus* Aiton) (Underwood 1893; Snyder 1896; Arthur 1899; Anderson and Anderson 1919)

R. idaeus L. ssp. *strigosus* (Michx.) Focke (=*Ru. strigosus* Michx.) (Jackson 1915)

R. occidentalis L. (Underwood 1893; Arthur 1899; Jackson 1915; Anderson and Anderson 1919)

Rubus spp. (Underwood 1893; Pipal 1915; Ruhl et al. 1980; Ruhl et al. 1981)

***Gymnosporangium bethelii* Kern**

Crataegus cerronis Nels. (Rosaceae) PUR: 10499

C. coccinea L. PUR: 10467

C. pringlei Sarg. PUR: 10510

C. punctata Jacq. PUR: 10511, 10512

Crataegus sp. PUR: 10525, 10521

C. chrysocarpa var. *chrysocarpa* Ashe (=*C. coccinea* L.)

C. phaenopyrum (L. f.) Medik. (=*C. cordata* (Mill.) Ait. nom. rej.) PUR: 10477, 10494, 10501

Sorbus americana Marshall (Rosaceae) PUR: 10531, 10532, 10533 [Doubtful record]

***Gymnosporangium biseptatum* Ellis**

Amelanchier canadensis (L.) Medik. (Rosaceae)

A. ovalis Medik. *(= A. vulgaris* Moench*)* Medik.

Amelanchier × intermedia Spach (pro sp.) *[arborea × canadensis]* Spach.

***Gymnosporangium clavariiforme* (Jacq.) DC.**

Amelanchier canadensis (L.) Medik. (Rosaceae) (McCain et al. 1990)

A. erecta Blanch.

Amelanchier × intermedia Spach (pro sp.) [*arborea × canadensis*] Spach.

***Gymnosporangium clavipes* Cooke & Peck**

Amelanchier canadensis (L.) Medik. (Rosaceae)

A. erecta Blanch.

A. laevis × *humilis* (Jackson 1920)
Crataegus crus-galli L. (Rosaceae) PUR: N11564
C. mollis Scheele (Jackson 1915)
C. punctata Jacq.
C. sp. (Ruhl et al. 1983)
C. tomentosa Anon.
Cydonia oblonga Mill. (=*C. vulgaris* (L.) Pers.) (Rosaceae) (Jackson 1915; Pipal 1915; Ruhl et al. 1980)
Juniperus communis L. (Cupressaceae)
J. virginiana L. (Jackson 1920; Van Hook 1921; McCain and Hennen 1981)
Mespilus germanica L. (Rosaceae) (Walker and Earhart 1962)
Pyrus calleryana Decne. (Rosaceae) (Creswell et al. 2016)

***Gymnosporangium confusum* Plowr.**
Crataegus chrysocarpa var. *chrysocarpa* Ashe (=*C. coccinea* L.) (Rosaceae)

***Gymnosporangium corniculans* Kern**
Amelanchier canadensis (L.) Medik. (Rosaceae)

***Gymnosporangium cornutum* Arthur ex F. Kern**
Sorbus americana Marshall (Rosaceae)

***Gymnosporangium davisii* Kern**
Photinia melanocarpa (Michx.) K.R. Robertson & Phipps (=*Aronia melanocarpa* (Michx.) Ellis) (Rosaceae)

Gymnosporangium ellisii (Berkeley) Ellis
See: *Gymnotelium myricatum* (Schwein.) Arthur

***Gymnosporangium exiguum* Kern**
Crataegus pringlei Sarg. (Rosaceae)

***Gymnosporangium exterum* Arthur & Kern**
Gillenia stipulata (Muhl. ex Willd.) Baill. (Rosaceae) (Jackson 1920; USDA 1960)
Juniperus virginiana L. (Cupressaceae)

***Gymnosporangium floriforme* Thaxt.**
Crataegus chrysocarpa var. *chrysocarpa* Ashe (=*C. coccinea* L.) (Rosaceae)

Gymnosporangium germinale (Schwein.) F. Kern
See: *Gymnosporangium clavipes* Cooke & Peck

***Gymnosporangium globosum* Farl.**
Crataegus anduennae Sarg. (Rosaceae) (Jackson 1920) [Doubtful host]
C. chrysocarpa var. *chrysocarpa* Ashe (=*C. coccinea* L.) (Underwood 1893; Arthur 1899; Jackson 1915; Anderson and Anderson 1919)
C. crus-galli L. (Arthur 1899; Jackson 1915; Anderson and Anderson 1919)
C. erythropoda Ashe
Crataegus × *lavallei* Hérincq ex Lavallee
C. mollis Scheele (Arthur 1899; Jackson 1915)
C. pringlei Sarg. (Jackson 1915)
C. punctata Jacq. (Underwood 1893; Arthur 1899; Jackson 1915; Anderson and Anderson 1919) PUR: 10771
Crataegus sp. (Ruhl et al. 1980, 1981; Snyder 1896; Anderson and Anderson 1919)
C. subvillosa Schrad. ex Torr. & A. Gray (Snyder 1898)
Juniperus virginiana L. (Cupressaceae) (Underwood 1893; Arthur 1899; Jackson 1915; Cooke 1967)
Malus sylvestris (L.) Mill. (Rosaceae)
M. angustifolia (Aiton) Michx. (USDA 1960)

M. coronaria (L.) Mill. (=*M. glaucescens* Rehd.)
Pyrus calleryana (Rosaceae) (PURN24059)

***Gymnosporangium inconspicuum* Kern**

Amelanchier erecta Blanch. (Rosaceae)

***Gymnosporangium juniperi-virginianae* Schwein.**

Ben Davis Apple (Rosaceae) (Van Hook 1924)
Crataegus punctata Jacq. (Rosaceae)
C. chrysocarpa var. *chrysocarpa* Ashe (=*C. coccinea* L.)
Juniperus virginiana L. (Cupressaceae) (Underwood 1893; Snyder 1896; Arthur 1899; Jackson 1915; Anderson and Anderson 1919; Emmons et al. 1960; Ruhl et al. 1981, 1983)
Malus coronaria (L.) Mill. (Rosaceae) (Arthur 1899; Jackson 1915); (=*Pyrus coronaria* L.) (Underwood 1893; Snyder 1896)
M. ioensis (Alph. Wood) Britton (Jackson 1915)
Malus sp. ['CRABAPPLE'] (Ruhl et al. 1980, 1981)
M. sylvestris (L.) Mill. (Ruhl et al. 1980, 1982, 1983); (=*M. malus* (L.) Britton and *Pyrus malus* L.) (Arthur 1899; Jackson 1915; Pipal 1915; Anderson and Anderson 1919)
Pyrus communis L. (Rosaceae) (Underwood 1893; Arthur 1899) [Doubtful host, likely a *Malus* sp.]
Host not reported (Van Hook 1910)

***Gymnosporangium kernianum* Bethel**

Amelanchier canadensis (L.) Medik. (Rosaceae)

Gymnosporangium libocedri (P. Henn.) Kern

See: *Gymnotelium blasdaleanum* (Dietel & Holw.) Arthur

Gymnosporangium macropus Link

See: *Gymnosporangium juniperi-virginianae* Schwein.

***Gymnosporangium nelsonii* Arthur**

Amelanchier canadensis (L.) Medik. (Rosaceae)
A. erecta Blanch.
A. ovalis (=vulgaris Moench*)* Medik.
Malus coronaria (L.) Mill. (Rosaceae)
M. ioensis (Alph. Wood) Britton
Sorbus americana Marshall (Rosaceae)

***Gymnosporangium nidus-avis* Thaxt.**

Malus sylvestris (L.) Mill. (Rosaceae) (USDA 1960) [Doubtful host, likely an *Amelanchier* sp.]

Gymnosporangium speciosum Peck

See: *Gymnotelium speciosum* (Peck) Aime & McTaggart

***Gymnosporangium trachysorum* Kern**

Crataegus cerronis Nels. (Rosaceae)
C. punctata Jacq.

***Gymnotelium blasdaleanum* (Dietel & Holw.) Arthur**

Amelanchier ovalis (=A. vulgaris Moench*)* Medik. (Rosaceae)
Crataegus pringlei Sarg. (Rosaceae)

***Gymnotelium myricatum* (Schwein.) Arthur**

Morella cerifera (L.) Small (=*Myrica cerifera* L.) (Myricaceae)

***Gymnotelium speciosum* (Peck) Aime & McTaggart**

Philadelphus coronarius L. (Saxifragaceae)

***Hyalopsora polypodii* (Pers.) Magnus**

Cystopteris fragilis (L.) Bernh. (Cystopteridaceae) (Underwood 1893; Jackson 1915; Emmons et al. 1960)

Kuehneola obtusa (F. Strauss) Arthur

See: *Phragmidium tormentillae* Fuckel

***Kuehneola uredinis* (Link) Arthur**

Rubus allegheniensis Porter (Rosaceae) (Jackson 1915; Anderson and Anderson 1919; Emmons et al. 1960)

R. cuneifolius Pursh (Underwood 1893; Arthur 1899; Jackson 1915)

R. flagellaris Willd. (=*R. procumbens* Muhl.) (Jackson 1915); (=*R. villosus* Aiton) (Underwood 1893; Arthur 1899)

R. hispidus L. (Jackson 1915)

Rubus sp. (Pipal 1915)

***Melampsora abietis-caprearum* Tubeuf**

Salix sericea Marshall (Salicaceae) (USDA 1960)

Salix sp. (Cooke 1967)

Melampsora* aff. *abietis-caprearum

Note: Similar to *M. abietis-caprearum* but with amphigenous uredinia and telia

Salix interior Rowlee (PURN15351)

***Melampsora abietis-canadensis* C.A. Ludw. ex Arthur**

[Considered as a taxonomic synonym for *M. medusae* (Cellerino 1999)]

Populus grandidentata Michx. (Salicaceae) (Underwood 1893; Arthur 1899; Jackson 1915)

P. heterophylla L. (Jackson 1915)

P. tremuloides Michx. (Jackson 1915)

P. deltoides W. Bartram ex Marshall(Jackson 1915)

Tsuga canadensis (L.) Carriere (Pinaceae)

Melampsora bigelowii Thüm.

See: *Melampsora paradoxa* Diet. et Holw.

***Melampsora epitea* Thüm., sensu Hylander et al. 1953**

Salix cordata Michx. (Salicaceae) (Underwood 1893)

S. eriocephala Michx.

S. interior Rowlee; (=*S. longifolia* Muhl.) (Underwood 1893)

S. nigra Marshall (Underwood 1893)

S. sericea Marshall (reported as *Salix* sp.) (Snyder 1898)

Salix sp. (Snyder 1898)

Note: *Melampsora epitea* is a species complex comprised of at least 14 cryptic species in North America; without examination of the original material, it is not possible to determine to which precise species these reports refer (Bennett et al. 2011).

***Melampsora euphorbiae* (Schwein.) Castagne**

Euphorbia commutata Engelm. ex A. Gray (Euphorbiaceae)

E. cyparissias L. (USDA 1960)

***Melampsora euphorbiae-gerardianae* W. Müll.**

Euphorbia commutata Engelm. ex A. Gray (Euphorbiaceae); (=*Tithymalus commutatus* (Engelm. ex A. Gray) Klotzsch & Garcke) (Jackson 1917)

Euphorbia sp. (USDA 1960)

Melampsora farinosa (Pers.) J. Schröt., sensu Arthur 1899

Note: this is a European species and a synonym of *M. caprearum*. However, the concept defined by Arthur (1899) includes two different species viz. *M. epitea* and *M. paradoxa* and it is most likely these reports refer to one or both of these.

Salix cordata Michx. (Salicaceae) (Arthur 1899)

S. discolor Muhl. (Arthur 1899)

S. fluviatilis Nutt. (Arthur 1899)

S. nigra Marshall (Arthur 1899; Van Hook 1912)

***Melampsora ferrinii* Toome & Aime**

Salix babylonica L. (Salicaceae)

***Melampsora lini* (Ehrenb.) Lév.**

Linum usitatissimum L. (Linaceae)

***Melampsora medusae* Thüm.**

Larix decidua Mill. (Pinaceae) (USDA 1960)

L. laricina (Du Roi) K. Koch

Populus balsamifera L. (Salicaceae) (Underwood 1893; Jackson 1915; Anderson and Anderson 1919; Emmons et al. 1960)

P. deltoides Bartram ex Marshall (Arthur 1899; Jackson 1915; Anderson and Anderson 1919; Newcombe et al. 2000); ssp. *monilifera* (Aiton) Eckenwalder (=*P. monilifera* Aiton) (Underwood 1893; Snyder 1896)

P. grandidentata Michx. (Jackson 1915)

P. nigra L. (McCain et al. 1990)

Populus sp. (Anderson and Anderson 1919)

P. tremuloides Michx. (Underwood 1893; Snyder 1898; Arthur 1899; Jackson 1915; Anderson and Anderson 1919)

Pseudotsuga menziesii (Mirb.) Franco (Pinaceae)

Host not reported (Van Hook 1910)

***Melampsora paradoxa* Dietel & Holw.**

Larix decidua Mill. (Pinaceae) (USDA 1960)

Salix amygdaloides Andersson (Salicaceae) (Jackson 1915)

S. bebbiana Sarg. (McCain et al. 1990)

S. caroliniana Michx. (=*S. wardii* (Bebb) Bebb) (Jackson 1915)

S. cordata Michx. (Jackson 1915; Anderson and Anderson 1919)

S. discolor Muhl. (Underwood 1893; Snyder 1896; Jackson 1915; Anderson and Anderson 1919)

S. interior Rowlee (=*S. longifolia* Muhl.) (Jackson 1915; Anderson and Anderson 1919)

S. nigra Marshall (Anderson and Anderson 1919; Van Hook 1928)

Salix sp. (Anderson and Anderson 1919; USDA 1960)

Melampsora populina (Jacq.) Lév., sensu Underwood, 1893 [Followed by Arthur (1899)]

See: *Melampsora abietis-canadensis* C.A. Ludw. ex Arthur and *M. medusae* Thüm.

Melampsora populina (Jacq.) Lév.

See: *Melampsora medusae* Thüm.

Melampsora salicina (DC.) Lev., sensu Underwood, 1893

Note: This name as applied by Underwood (1893) could refer to either *Melampsora epitea* Thüm. or *M. paradoxa* Dietel & Holw.

Salix sp. (Salicaceae) (Underwood 1893)

Melampsora salicis-capreae (Pers.) G. Winter

See: *Melampsora paradoxa* Dietel & Holw.

***Melampsora* sp.**

Populus sp. (Salicaceae) (Ruhl et al. 1981)

Melampsorella caryophyllacearum (DC.) J. Schröt.

See: *Melampsorella elatina* (Alb. & Schwein.) Arthur

***Melampsorella elatina* (Alb. & Schwein.) Arthur**

Cerastium arvense subsp. *strictum* (L.) Ugborogho (Caryophyllaceae)

Melampsoridium betulae Arthur

See: *Melampsoridium betulinum* (Pers.) Kleb.

***Melampsoridium betulinum* (Pers.) Kleb.**

Betula alleghaniensis Britton (Betulaceae); var. *alleghaniensis* Britton (=*B. lutea* Michx. f.) (Jackson 1915; Pipal 1915; McCain et al. 1990)

Micropuccinia andina (Dietel & Neger) Arthur & H.S. Jacks.

See: *Puccinia andina* Dietel & Neger

***Milesia marginalis* Faull & W.R. Watson**

Dryopteris marginalis (L.) A. Gray (Dryopteridaceae)

Dryopteris sp.

***Naohidemyces vaccinii* (Jørst.) S. Sato, Katsuya & Y. Hirats. ex Vanderweyen & Fraiture**

Tsuga canadensis (L.) Carrière (Pinaceae) (Jackson 1920; USDA 1960)

Nigredo amphidyma (Syd. & P. Syd.) Arthur

See: *Uromyces amphidymus* Syd. & P. Syd.

Nigredo appendiculata (Pers.) Arthur

See: *Uromyces appendiculatus* var. *appendiculatus* (Pers.) Unger and *U. vignae* Barclay

Nigredo caladii (Schwein.) Arthur

See: *Uromyces ari-triphylli* (Schwein.) Seeler

Nigredo caryophyllina (Schrank) Arthur

See: *Uromyces dianthi* (Pers.) Niessl

Nigredo fabae (Pers.) Arthur

See: *Uromyces viciae-fabae* (Pers.) J. Schröt.

Nigredo fallens (Desm.) Arthur

See: *Uromyces trifolii-repentis* var. *fallens* (Desm.) Arthur.

Nigredo hedysari-paniculati (Schwein.) Arthur

See: *Uromyces hedysari-paniculati* (Schwein.) Farl.

Nigredo howei (Peck) Arthur

See: *Uromyces asclepiadis* Cooke

Nigredo hyperici-frondosi (Schwein.) Arthur

See: *Uromyces triquetrus* Cooke

Nigredo lespedezae-procumbentis (Schwein.) Arthur

See: *Uromyces lespedezae-procumbentis* (Schwein.) M.A. Curtis

Nigredo medicaginis (Pass.) Arthur

See: *Uromyces striatus* J. Schröt.

Nigredo minuta (Dietel) Arthur

See: *Uromyces minutus* Dietel

Nigredo perigynia (Halst.) Arthur

See: *Uromyces perigynius* Halst.

Nigredo plumbaria (Peck) Arthur
See: *Uromyces plumbarius* Peck
Nigredo polygoni (Pers.) Arthur
See: *Uromyces polygoni-avicularis* (Pers.) G.H. Otth
Nigredo polemonii (Peck) Arthur
See: *Uromyces acuminatus* Arthur
Nigredo proëminens (DC.) Arthur
See: *Uromyces proëminens* (DC.) Lév.
Nigredo rhynchosporae (Ellis) Arthur [as '*rhyncosporae*']
See: *Uromyces rhynchosporae* Ellis
Nigredo scirpi (Castagne) Arthur
See: *Uromyces lineolatus* subsp. *nearcticus* Savile
Nigredo silphii (Burrill) Arthur
See: *Uromyces silphii* (Syd. & P. Syd.) Arthur
Nigredo spermacoces (Schwein.) Arthur
See: *Uromyces spermacoces* (Schwein.) M.A. Curtis
Nigredo trifolii (R. Hedw.) Arthur
Note: As applied by Arthur (N. American Flora 7: 255) this likely refers to *U. trifolii-repentis* (not *U. trifolii*).
See: *Uromyces trifolii-repentis* Liro and *U. trifolii-repentis* var. *fallens* (Arthur) Cummins
Nigredo valens (F. Kern) Arthur
See: *Uromyces valens* F. Kern
***Phakopsora crotonis* (Burrill) Arthur**
Croton capitatus Michx. (Euphorbiaceae) (McCain et al. 1990)
C. monanthogynus Michx. (McCain et al. 1990; Buriticá 1999)
***Phakopsora pachyrhizi* Syd. & P. Syd.**
Glycine max (L.) Merr. (Fabaceae)
***Phragmidium americanum* (Peck) Dietel**
Rosa carolina L. (Rosaceae) (Jackson 1915)
R. rubiginosa L. (Jackson 1915)
R. setigera Michx. (Jackson 1915; Anderson and Anderson 1919)
R. virginiana Mill. (Jackson 1915)
Rosa spp. (Jackson 1915; Pipal 1915)
Phragmidium disciflorum (Tode) J. James
See: *Phragmidium mucronatum* (Pers.) Schltdl.
Phragmidium fragariae (DC.) Rossmann
See: *Phragmidium tormentillae* Fuckel
***Phragmidium ivesiae* Syd. & P. Syd.**
Potentilla recta L. (Rosaceae) (Savile 1976)
***Phragmidium mexicanum* (Mains) H.Y. Yun, Minnis & Aime**
Duchesnea indica (Andrews) Focke (Rosaceae) (Ruhl and McCain 1986)
***Phragmidium montivagum* Arthur**
(Rosaceae) (PURN24227)
***Phragmidium mucronatum* (Pers.) Schltdl.**
Rosa carolina L. (Rosaceae) (Underwood 1893; Arthur 1899)
R. humilis Marshall (Arthur 1899)
R. lucida Ehrh. (Underwood 1893)
R. setigera Michx. (Underwood 1893; Arthur 1899)

Rosa spp. (Underwood 1893; Jackson 1915; Pipal 1915; Lee 1929) PUR: 8197

Phragmidium rosae-setigerae Dietel

See: *Phragmidium americanum* (Peck) Dietel

***Phragmidium speciosum* (Fr.) Bonard**

Rosa arkansana var. *suffulta* (Greene) Cockerell (=*R. suffulta* Greene) (Rosaceae)

R. carolina L. (Jackson 1915; Snyder 1896; Arthur 1899)

R. humilis Marshall (Arthur 1899)

R. nitida Willd.

Rosa sp. (Van Hook 1924)

R. virginiana Mill. (Jackson 1915)

Phragmidium subcorticium (Schrank) G. Winter

See: *Phragmidium mucronatum* (Pers.) Schltdl.

***Phragmidium tormentillae* Fuckel**

Potentilla canadensis L. (Rosaceae) (Underwood 1893; Snyder 1896; Arthur 1899; Jackson 1915; Anderson and Anderson 1919; Jackson 1920; Van Hook 1923, 1929)

P. simplex Michx. (Emmons et al. 1960; Ruhl and McCain 1986)

Phragmidium triarticulatum Berk. & M.A. Curtis

See: *Phragmidium tormentillae* Fuckel

***Pileolaria brevipes* Berk. & Ravenel**

Toxicodendron pubescens Mill. (=*Rhus toxicodendron* L.) (Anacardiaceae) (Underwood 1893; Snyder 1896; Anderson and Anderson 1919) [Doubtful host]

T. radicans (L.) Kuntze (=*Rhus radicans* L.) (Arthur 1899; Jackson 1915); subsp. *radicans* (=*R. radicans* L.) (Cooke 1967)

***Pileolaria cotini-coggygriae* Tai & Cheo**

Cotinus coggygria Scop. (Kaishian et al. 2023; PUR058489)

Pileolaria toxicodendri (Berk. & Ravenel) Arthur

See: *Pileolaria brevipes* Berk. & Ravenel

Polythelis fusca Arthur

See: *Tranzschelia pseudofusca* M. Scholler & M. Abbasi

Polythelis thalictri (Chevall.) Arthur

See: *Tranzschelia thalictri* (Chev.) Dietel

***Prospodium transformans* (Ellis & Everh.) Cummins**

Tecoma stans (L.) Juss. ex Kunth (Bignoniaceae)

***Puccinia acetosae* (Schumach.) Körn.**

Rumex acetosella L. (Polygonaceae) (Jackson 1917; USDA 1960)

Puccinia albiperidia Arthur

See: *Puccinia caricina* DC., s.lat.

***Puccinia aletridis* Berk. & M.A. Curtis**

Aletris farinosa L. (Nartheciaceae) (Jackson 1915; USDA 1960)

***Puccinia amphigena* Dietel**

Ammophila breviligulata Fernald (Poaceae) (USDA 1960)

Calamovilfa longifolia (Hook.) Scribn. (Poaceae) (Cummins and Greene 1961); var. *magna* Scribn. & Merr. (McCain et al. 1990)

Smilax herbacea L. (Smilacaceae) (Cummins and Greene 1961)

S. tamnoides L. (=*hispida* Muhl. ex Torr.) (Cummins and Greene 1961)

***Puccinia andina* Dietel & Neger**

Ranunculus hispidus var. *nitidus* (Chapm.) T. Duncan (=*R. septentrionalis* Poir.) (Ranunculaceae) (Arthur 1899; Jackson 1915; USDA 1960)

Puccinia andropogi Schwein.

See: *Puccinia andropogonis* Schwein

***Puccinia andropogonis* Schwein.**

Aesculus glabra Willd. (Hippocastanaceae)

A. hippocastanum L.

Andropogon gerardii Vitman (Poaceae); (=*A. furcatus* Muhl. ex Willd.) (Snyder 1896; Arthur 1899; Jackson 1915)

Andropogon sp. (Underwood 1893)

Comandra umbellata (L.) Nutt. (Santalaceae) (Underwood 1893; Jackson 1915; Anderson and Anderson 1919)

Orbexilum onobrychis (Nutt.) Rydb. (=*Psoralea onobrychis* Nutt.) (Fabaceae) (Underwood 1893)

Penstemon digitalis Nutt. ex Sims (Plantaginaceae)

P. hirsutus (L.) Willd. (Jackson 1915; USDA 1960) PUR: 88314

P. laevigatus Aiton; (=*P. penstemon* (L.) Britton) (Jackson 1920)

P. glaber var. *alpinus* (Torr.) A. Gray (=*P. alpinus* Torr.)

P. pubescens Aiton [as '*Pentstemon pubescens*'] (Snyder 1896)

Schizachyrium scoparium (Michx.) Nash (Poaceae) (Jackson 1915); (=*Andropogon scoparius* Michx., as ['*scoparus*']) (Snyder 1896; Arthur 1899)

Zanthoxylum americanum Mill. (Rutaceae) (USDA 1960; McCain et al. 1990)

Puccinia andropogonis var. *pentastemonis* (Schwein.) Arthur

See: *Puccinia andropogonis* Schwein.

***Puccinia anemones-virginianae* Schwein.**

Anemone canadensis L. (Ranunculaceae) (Cooke 1967; McCain and Hennen 1981)

A. cylindrica A. Gray (Snyder 1896; Arthur 1899; Jackson 1915)

Anemone sp.

A. virginiana L. (Jackson 1915; Anderson and Anderson 1919)

***Puccinia angelicae* (Schumach.) Fuckel**

Taenidia integerrima (L.) Drude (Apiaceae) (Jackson 1915; USDA 1960)

***Puccinia angustata* Peck**

Eriophorum virginicum L. (Cyperaceae)

E. viridicarinatum (Engelm.) Fernald

Lycopus americanus Muhl. ex W.P.C. Barton (=*L. sinuatus* Elliott) (Lamiaceae) (Snyder 1898; Jackson 1915)

Lycopus sp. (Underwood 1893)

L. uniflorus Michx. (Jackson 1915)

Pycnanthemum virginianum (L.) T. Dur. & B.D. Jacks. ex B.L. Rob. & Fernald (Lamiaceae) (USDA 1960); (=*P. lanceolatum* Pursh); (=*Koellia virginiana* (L.) MacMill.) (Jackson 1920)

Scirpus atrovirens Willd. (Cyperaceae) (Underwood 1893; Snyder 1896; Arthur 1899; Jackson 1915; Anderson and Anderson 1919; Savile 1972)

S. cyperinus (L.) Kunth (Arthur 1899); (=*Eriophorum cyperinum* L.) (Underwood 1893)

Scirpus sp.

Puccinia anomala Rostr.

See: *Puccinia hordei* G.H. Otth

***Puccinia antirrhini* Dietel & Holw.**

Antirrhinum majus L. (Plantaginaceae) (Jackson 1915; Pipal 1915; Anderson and Anderson 1919) PUR: 42777, 42487, 42489,42490, 42492, 42493

Antirrhinum sp. PUR: N10830

***Puccinia apocrypta* Ellis & Tracy**

Asperella hystrix (L.) Humb. in Roem. & Usteri (Poaceae) (Underwood 1893)

Elymus hystrix L. (=*Hystrix patula* Moench) (Poaceae) (USDA 1960); var. *hystrix* (=*H. hystrix* (L.) Millsp.) (Arthur 1899)

***Puccinia argentata* (Schultz) G. Winter**

Impatiens capensis Meerb. (=*I. fulva* Nutt.) (Balsaminaceae) (Snyder 1896); (=*I. biflora* Walter) (Arthur 1899; Jackson 1915)

I. flava (Underwood 1893) [Doubtful host, likely refers to *I. fulva*]

I. capensis Meerb. (reported as *I. flava*) (Underwood 1893)

I. pallida Nutt. (USDA 1960)

Puccinia aristidae Tracy

See: *Puccinia subnitens* Dietel

***Puccinia arundinariae* Schweinitz**

Smilax sp. (Smilacaceae) (Cummins 1971) PUR: 45961

***Puccinia asparagi* DC.**

Allium cepa L. (Amaryllidaceae) (Ruhl et al. 1983) [Doubtful host]

Asparagus officinalis L. (Asparagaceae) (Jackson 1915; Anderson and Anderson 1919; Ruhl et al. 1980)

Asparagus sp. (Pipal 1915)

Host not reported (Van Hook 1910)

Puccinia asperifolii (Pers.) Wettst. [as' *asperifolia*' by Pipal (1915)]

See: *Puccinia recondita* Roberge ex Desm. s.str.

Puccinia asteris Duby

See: *Puccinia cnici-oleracei* Pers. Ex Desm.

Puccinia asterum (Schwein.) F. Kern

See: *Puccinia dioicae* Magnus, s.lat.

***Puccinia atrofusca* (Dudley & C.H. Thomps.) Holw.**

Artemisia (=*Dracunculoides* L.) *dracunculus* L. (Asteraceae)

Artemisia sp.

***Puccinia bardanae* (Wallr.) Corda**

Arctium lappa L. (Asteraceae) (Jackson 1915; Anderson and Anderson 1919) [Doubtful host, likely refers to *A. minus*]

A. minus (Hill) Bernh. (Savile 1970); PUR: N2751, 38010, 38119, 38120, 38124, 38125, 38126, 38141, 38143, 38154, 49274, 61540, 88329, 89269, N1943, N4508, N4509, N6319

Puccinia bolleyana Saccardo

See: *Puccinia sambuci* (Schwein.) Arthur

Puccinia brachypodii G.H. Otth

See: *Puccinia poae-nemoralis* G.H. Otth

Puccinia brachypodii var. *arrhenatheri* (Kleb.) Cummins & H.C. Greene

See: *Puccinia magelhaenica* Peyr.

Puccinia brachypodii var. *poae-nemoralis* (G.H. Otth) Cummins & H.C. Greene

See: *Puccinia poae-nemoralis* G.H. Otth

***Puccinia bromina* Erikss., s.lat.**

Bromus pubescens Muhl. ex Willd. (Poaceae) PUR: 25031, 25039, 25041

B. secalinus L. PUR: 25083

Puccinia calcitrapae var. *bardanae* (Wallr.)

See: *Puccinia bardanae* (Wallr.) Corda

Puccinia calcitrapae var. *centaureae* (DC.) Cummins

See: *Puccinia laschii* var. *laschii* Lagerh.

***Puccinia calthae* Link**

Caltha palustris L. (Ranunculaceae) (Jackson 1915)

***Puccinia canaliculata* (Schwein.) Lagerh.**

Ambrosia trifida L. (Asteraceae) (1, Jackson 1915; Kern 1919)

Cyperus esculentus L. (Cyperaceae) (Jackson 1915; Kern 1919; Van Hook 1929)

C. filiculmis Vahl. (Jackson 1915)

C. odoratus L.; (=*Cyperus engelmannii* Steud.) (Cyperaceae) (Jackson 1915); (=*C. speciosus* Vahl) (Jackson 1920)

Cyperus sp.

C. strigosus L. (Snyder 1896; Jackson 1915; Kern 1919)

C. schweinitzii Torr. (Jackson 1915)

Xanthium strumarium L. var. *canadense* (Mill.) Torr. & A. Gray (=*X. commune* Britton) (Asteraceae) (Jackson 1915); var. *glabratum* (DC.) Cronquist (=*X. americanum* Walter) (Jackson 1915)

Xanthium sp. (Kern 1919)

Puccinia caricis (Schumach.) Rebent.

See: *Puccinia caricina* DC.

***Puccinia caricina* DC., s.lat.**

Carex blanda Dewey (Cyperaceae)

C. bullata Schkuhr ex Willd. (Cyperaceae) (Underwood 1893)

C. cephalophora Muhl. ex Willd. (Jackson 1920)

C. conoidea Schkuhr ex Willd. (Jackson 1920)

C. crinita Lam. (Jackson 1915)

C. davisii Schwein & Torr. (McCain and Hennen 1981)

C. digitalis Willd. (Jackson 1915)

C. emoryi Dewey

C. frankii Kunth (Snyder 1898)

C. gracilescens Steud. (McCain and Hennen 1981)

C. hirtifolia Mack. (Jackson 1915) PUR: 27716; (=*C. pubescens* Muhl. ex Schkuhr) (Anderson and Anderson 1919; Jackson 1920)

C. hitchcockiana Dewey (Jackson 1915)

C. laxiflora Lam. (Jackson 1915)

C. lupuliformis Sartwell ex Dewey (Jackson 1920)

C. lurida Wahlenb. (Underwood 1893)

C. rosea Schkuhr ex Willd.

C. siccata Dewey (=*Carex foenea* Willd.) (Underwood 1893)

Carex sp. (Snyder 1896)

C. sparganioides Muhl. ex Willd. (Jackson 1920)

C. squarrosa L. (Jackson 1915)

C. stricta Lam. (Jackson 1915)

C. tetanica Schkuhr (Jackson 1915)

C. trichocarpa Muhl. ex Willd.
Ribes americanum Mill. [as'*americana*'] (Grossulariaceae) (Jackson 1920)
R. aureum Pursh
R. cynosbati L. (Underwood 1893; Snyder 1898; Anderson and Anderson 1919; McCain and Hennen 198; PUR: 27120 – Greenhouse)
R. cynosbati (=*Grossularia cynosbati* (L.) Mill.) (Jackson 1915)
R. floridum L'Herit (Anderson and Anderson 1919) [Doubtful host]
R. hirtellum Michx.; (=*G. hirtella* (Michx.) Spach) (Jackson 1920)
R. missouriense Nutt. (=*G. missouriensis* (Nutt.) Coville & Britton) (Jackson 1915)
R. oxyacanthoides L. ssp. *oxyacanthoides* (=*G. oxyacanthoides* (L.) Mill.) (Jackson 1915; Anderson and Anderson 1919); ssp. *setosum* (Lindl.) Sinnott (=*G. setosa* (Lindl.) Coville & Britton) (Jackson 1915)
R. rotundifolium Michx. (Underwood 1893); (=*G. rotundifolia* (Michx.) Coville & Britton) (Jackson 1915)
R. rubrum L. (=*R. vulgare* Lam.) (Jackson 1920)
Ribes sp. (Van Hook 1929)
R. uva-crispa L.

***Puccinia caricina* var. *limosae* (Magnus) Jørst.**

Lysimachia thyrsiflora L. (=*Naumburgia thyrsiflora* (L.) Duby) (Primulaceae) (Jackson 1917)

Puccinia caricis-erigerontis Arthur

See: *Puccinia dioicae* Magnus, s.lat.

***Puccinia caulicola* Tracy & Gall.**

Salvia lanceolata Lam. (Lamiaceae)

***Puccinia chloridis* Speg.**

Asclepias incarnata L. (Apocynaceae)
A. syriaca L.

Puccinia chrysanthemi Roze

See: *Puccinia tanaceti* var. *tanaceti* DC.

***Puccinia circaeae* Pers.**

Circaea lutetiana L. (Onagraceae) (Underwood 1893; Snyder 1896; Arthur 1899; Jackson 1915; Anderson and Anderson 1919); subsp. *canadensis* (L.) Asch. & Magnus (=*C. quadrisulcata* (Maxim.) Franch. & Savigny) (Emmons et al. 1960)

Puccinia cirsii Lasch

See: *Puccinia laschii* var. *laschii* Lagerh.

Puccinia clematidis (DC.) Lagerh., nom. ambig.

Anemone virginiana L. (Ranunculaceae) (Jackson 1920)
Pascopyrum smithii (Rydb.) Á. Löve (=*Agropyron smithii* Rydb.) (Poaceae) (Jackson 1920)

***Puccinia cnici* var. *cnici* H. Mart.**

Cirsium lanceolatum Hill (Asteraceae) (Jackson 1915; Anderson and Anderson 1919)
C. vulgare (Savi) Ten. (Savile 1970)

***Puccinia cnici-oleracei* Pers. ex Desm.**

Aster sp. (Asteraceae) (Underwood 1893; Snyder 1898; Anderson and Anderson 1919)
Calendula officinalis L. (Asteraceae) PUR: 42243 - Greenhouse
Dimorphotheca cuneata (Thunb.) Less. (Asteraceae)*

Symphyotrichum cordifolium (L.) G.L. Nesom (=*Aster cordifolius* L.) (Asteraceae) (Underwood 1893; Arthur 1899; Jackson 1915; Anderson and Anderson 1919); (=*A. sagittifolius* Wedemeyer ex Willd.) (Arthur 1899; Jackson 1915)
S. lanceolatum (=*A. paniculatus* Lam.) (Arthur 1899); subsp. *lanceolatum* var. *lanceolatum* (Willd.) G.L. Nesom (=*A. paniculatus* Lam.) (Underwood 1893; Jackson 1915; Anderson and Anderson 1919); subsp. *lanceolatum* var. *lanceolatum* (=*A. diffusus*) (Snyder 1896)
S. lateriflorum var. *lateriflorum* (L.) Á. Löve & D. Löve (=*A. lateriflorus* (L.) Britton) (Arthur 1899; Jackson 1920)
S. novae-angliae (L.) G.L. Nesom (=*A. novae-angliae* L.) (Jackson 1915)
S. novi-belgii (L.) G.L. Nesom var. *novi-belgii* (=*A. longifolius* Lam.) (Jackson 1915)
S. oolentangiense var. *oolentangiense* (Riddell) G.L. Nesom (=*A. azureus* Lindl.) (Jackson 1915)
S. praealtum var. *praealtum* (Poir.) G.L. Nesom (=*A. salicifolius* Aiton) (Arthur 1899; Jackson 1920)
S. puniceum var. *puniceum* (L.) Á. Löve & D. Löve (=*A. puniceus* L.) (Jackson 1915)
S. shortii (Lindl.) G.L. Nesom (=*A shortii* Lindl.) (Arthur 1899)

***Puccinia cockerelliana* Bethel ex Arthur**

Thalictrum dioicum L. (Ranunculaceae)

***Puccinia conoclinii* var. *conoclinii* Seym. ex. Burrill**

Conoclinium coelestinum (L.) DC. (=*Eupatorium coelestinum* (L.) DC) (Asteraceae) (Jackson 1915)
Eupatorium sp. (Asteraceae) (USDA 1960)
Fleischmannia incarnata (Walter) R.M. King & H. Rob. (=*E. incarnatum* Walter) (Asteraceae) (Jackson 1920; Cummins et al. 1969)

***Puccinia convolvuli* (Pers.) Castagne**

Calystegia sepium (L.) R. Br. (Convolvulaceae) (Jackson 1915); (=*Convolvulus sepium* L.) (Underwood 1893; Snyder 1896; Arthur 1899; Anderson and Anderson 1919); [reported as *Polygonum dumetorum* L.] (Snyder 1896)
Convolvulus arvensis L. (Convolvulaceae) (USDA 1960)
Convolvulus sp.

***Puccinia coronata* Corda, s.lat.**

Alopecurus aequalis Sobol. (Poaceae) (USDA 1960); (= *A. aristulatus* Michx.) (Jackson 1920)
Cinna arundinacea L. (Poaceae) (Jackson 1915; USDA 1960)
Frangula caroliniana (Walter) A. Gray (=*Rhamnus caroliniana* Walter) (Rhamnaceae) (Jackson 1915; USDA 1960)
F. purshiana (DC.) A. Gray
Hordeum jubatum L. (Poaceae)
Rhamnus alnifolia L'Hér. (Rhamnaceae) (Jackson 1920)
R. cathartica L. (Van Hook 1925)
R. lanceolata Pursh (Arthur 1899; USDA 1960)
Host not reported (Van Hook 1910)
Also see: *Puccinia coronata* var. *avenae* f. sp. *avenae* Urban & Marková, *P. coronati-brevispora* M. Liu & Hambl.

***Puccinia coronata* var. *avenae* f. sp. *avenae* Urban & Marková**

Avena sativa L. (Poaceae) (Snyder 1896, 1898; Arthur 1899; Jackson 1915; Pipal 1915; Anderson and Anderson 1919; PUR: N1190 – Greenhouse)

Lolium perenne L. (Poaceae)
Lolium sp. (Poaceae)
Poa pratensis L. (Poaceae)

***Puccinia coronatae-brevispora* M. Liu & Hambl.**
Bromus sp. (Poaceae) PUR: N11047

Puccinia coronata var. *avenae* Fraser & Ledinham
See: *Puccinia coronata* var. *avenae* f. sp. *avenae* Urban & Marková

***Puccinia coronatae-calamagrostidis* M. Liu & Hambl. [as '*coronati-calamagrostidis*']**
Calamagrostis canadensis (Michx.) P. Beauv. (Poaceae) (Underwood 1893; Arthur 1899; Jackson 1915)

***Puccinia crandallii* Pammel & H.H. Hume**
Symphoricarpos albus (L.) S.F. Blake (Caprifoliaceae)

***Puccinia cyani* var. *cyani* Pass.**
Centaurea cyanus L. (Asteraceae) (USDA 1960; Savile 1970)

***Puccinia cyperi* Arthur**
Conyza canadensis (L.) Cronquist (Asteraceae)
Cyperus echinatus (L.) Alph. Wood (=*C. ovularis* (Michx.) Torr.) (Cyperaceae) (McCain et al. 1990)
C. lupulinus subsp. *lupulinus* (Spreng.) Marcks (=*C. filiculmis* Vahl) (Kern 1919; Jackson 1920); subsp. *macilentus* (Fernald) Marcks (=*C. filiculmis* var. *macilentus* Fernald) (McCain et al. 1990)
C. schweinitzii Torr. (Kern 1919; Jackson 1920)
Cyperus sp. (Underwood 1893)
C. strigosus L. (Underwood 1893; Snyder 1896; Arthur 1899; Anderson and Anderson 1919; Kern 1919; Lopez-Franco and Hennen 1990)
Erigeron annuus (L.) Pers. (Asteraceae)
E. strigosus Muhl. ex Willd.

***Puccinia cypripedii* Arthur**
Calopogon tuberosus (L.) Britton, Sterns & Poggenb. (Orchidaceae); var. *tuberosus* (=*Limodorum tuberosum* L.) (Jackson 1915)
Calopogon sp. (McCain et al. 1990)

***Puccinia dayi* Clinton**
Lysimachia ciliata L. (Primulaceae); (=*Steironema ciliatum* (L.) Baudo) (Primulaceae) (Underwood 1893; Arthur 1899; Jackson 1915; Anderson and Anderson 1919)

***Puccinia difformis* Kunze**
Galium aparine L. (Rubiaceae) (Arthur 1899; Jackson 1915)

***Puccinia dioicae* Magnus, s.lat.**
Agoseris glauca (Pursh) Raf. (Asteraceae)
Brachychaeta sphacelata (Raf.) Britton (Asteraceae) (Jackson 1920)
Calylophus serrulatus (Nutt.) P.H. Raven (=*Oenothera serrulata* Nutt.) (Onagraceae)
Carex albicans Willd. ex Spreng. var. *albicans* (=*C. varia* Muhl. ex Willd.) (Cyperaceae) (Jackson 1920)
C. annectens (E.P. Bicknell) E.P. Bicknell (McCain and Hennen 1981; Schoknecht 1981)
C. brevior (Dewey) Mack.
C. cephaloidea (Dewey) Dewey (Jackson 1915)
C. cephalophora Muhl. ex Willd. (Jackson 1915)

Carex cf. *frankii* Kunth
C. communis L.H. Bailey (McCain and Hennen 1981)
C. conoidea Schkuhr ex Willd. (Jackson 1915)
C. festucacea Schkuhr ex Willd. (Jackson 1915)
C. jamesii Schwein.
C. laeviculmis Meinsh. (Cyperaceae)
C. laeviconica Dewey (Jackson 1920)
C. lanuginosa Michx. (Jackson 1915)
C. lupuliformis Sartwell ex Dewey (Jackson 1920)
C. muskingumensis Schwein. (Jackson 1920)
C. nebrascensis Dewey (Jackson 1915)
C. normalis Mack. (Jackson 1920)
C. oligocarpa Schkuhr ex Willd. (Jackson 1915)
C. pellita Muhl. ex Willd. (=*C. lanuginosa* auct. non Michx.)
C. pensylvanica Lam. (Jackson 1915; USDA– inoculation using aeciospores from *Dirca palustris*)
C. rosea Schkuhr (McCain and Hennen 1981)
C. siccata Dewey (=*C. foenea* Willd.) (Jackson 1915)
Carex sp. (Underwood 1893; Jackson 1915; Cooke 1967)
C. sparganioides Muhl. ex Willd. (Snyder 1896; Arthur 1899; Arthur 1909; Jackson 1915)
C. stenolepis Less. ex Steud. (Underwood 1893)
C. stipata Muhl. ex Willd. (Arthur 1909; Jackson 1915; Jackson 1920)
C. straminea Willd. ex Schkuhr (Underwood 1893; Jackson 1915)
C. tetanica Schkuhr (Jackson 1915)
C. tribuloides Wahlenb. (Jackson 1920)
C. trichocarpa Muhl. ex Willd. (Jackson 1915)
C. umbellata Schkuhr ex Willd. (=*C. abdita* E.P. Bicknell) (Jackson 1920)
C. virescens Muhl. ex Willd. (Underwood 1893)
C. vulpinoidea Michx. (Cyperaceae) (Underwood 1893; Snyder 1896; Arthur 1899; Arthur 1909; Jackson 1915)
C. willdenowii Schkuhr ex Willd. (Jackson 1920)
Conyza canadensis var. *canadensis* (L.) Cronquist (=*Erigeron canadensis* L.) (Asteraceae); (=*Leptilon canadense* (L.) Britton) (Jackson 1915)
Dirca palustris L. (Thymelaeaceae) (Underwood 1893; Jackson 1917; Anderson and Anderson 1919; Van Hook 1927) PUR: 24 specimens
Dulichium arundinaceum (L.) Britton (Cyperaceae) (Jackson 1915)
D. spathaceum Rich. (Underwood 1893)
Erigeron annuus (L.) Pers. (Asteraceae) (Jackson 1915; Anderson and Anderson 1919) PUR: 28800
E. pulchellus Michx. (Jackson 1920)
E. strigosus var. *strigosus* Muhl. ex Willd. (=*E. ramosus* (Walter) Britton, Sterns & Poggenb.) (Jackson 1915)
Euthamia graminifolia (L.) Nutt. (Asteraceae)
Lactuca canadensis L. (Asteraceae) (Jackson 1915; Anderson and Anderson 1919; Jackson 1920)
L. floridana (L.) Gaertn. (Jackson 1915) [Doubtful host, likely is *L. canadensis*]
L. sativa L. (Jackson 1915; USDA 1960)
L. virosa L. (Jackson 1915)

Oenothera biennis L. (Onagraceae) (Underwood 1893; Snyder 1896; Jackson 1915; Anderson and Anderson 1919)
Phryma leptostachya L. (Phrymaceae)
Sericocarpus sp. (Asteraceae) (McCain et al. 1990)
Solidago altissima L. (Asteraceae) (Jackson 1920)
S. arguta Aiton (Anderson and Anderson 1919)
S. caesia L. (Underwood 1893; Jackson 1915; Anderson and Anderson 1919)
S. canadensis L. (Underwood 1893; Jackson 1915; Savile 1972)
S. flexicaulis L. (Jackson 1915); (=*S. latifolia* L.) (Underwood 1893)
S. gigantea Aiton (=*S. serotina* Aiton) (Jackson 1915)
S. juncea Aiton
S. patula Muhl. ex Willd. (Jackson 1915) PUR: 88315
S. rugosa Mill.
Solidago sp. (Underwood 1893; McCain and Hennen 1981)
S. ulmifolia Muhl. ex Willd. (Jackson 1915)
S. missouriensis var. *fasciculata* Holz. (=*S. glaberrima* M. Martens)
Symphyotrichum cordifolium (L.) G.L. Nesom (=*Aster cordifolius* L.) (Asteraceae) (Underwood 1893; Jackson 1915; Anderson and Anderson 1919); (=*A. sagittifolius* Wedemeyer ex Willd.) (Underwood 1893; Jackson 1915; Anderson and Anderson 1919)
S. drummondii var. *drummondii* (Lindl.) G.L. Nesom *(=A. drummondii* Lindl.) (Jackson 1915)
S. ericoides var. *ericoides* (L.) G.L. Nesom (=*A. ericoides* L.)
S. foliaceum var. *canbyi* (A. Gray) G.L. Nesom (=*A. tweedyi* Rydb.)
S. lanceolatum subsp. *lanceolatum* var. *lanceolatum* (Willd.) G.L. Nesom (=*A. paniculatus* Lam.) (Jackson 1915)
S. praealtum var. *praealtum* (Poir.) G.L. Nesom (=*A. salicifolius* Aiton, non Lam.)
S. puniceum var. *puniceum* (L.) Á. Löve & D. Löve (=*A. puniceus* L.) (Jackson 1920)
S. shortii (Lindl.) G.L. Nesom (=*A. shortii* Lindl.) (Anderson and Anderson 1919)
Puccinia dispersa Erikss. & Henning
See: *Puccinia recondita* Roberge ex Desm. s.str.
***Puccinia distichlidis* Ellis & Everh.**
Lysimachia ciliata L. (Primulaceae)
***Puccinia dochmia* Berk. & M.A. Curtis**
Note: Doubtful record, likely refers to *Puccinia schedonnardi*
Muhlenbergia diffusa (Muhl.) Farw. (Poaceae) (Underwood 1893; Arthur 1899)
M. sylvatica (Torr.) Torr. ex A. Gray (Arthur 1899)
Puccinia dulichii P. Syd. & Syd.
See: *Puccinia dioicae* Magnus, s.lat.
***Puccinia eatoniae* Arthur**
Myosotis verna Nutt. (=*M. virginica* (L.) Britton, Sterns & Poggenb.) (Boraginaceae) (USDA 1960)
Ranunculus abortivus L. (Ranunculaceae) (Underwood 1893; Jackson 1915; Anderson and Anderson 1919)
Sphenopholis intermedia (Rydb.) Rydb. (Poaceae)
S. obtusata (Michx.) Scribn.
Sphenopholis sp.
Sphenopholis × pallens (Biehler) Scribn. (pro sp.) *[obtusata × pensylvanica]* (Jackson 1915)

Puccinia eleocharidis **Arthur**

Ageratina altissima (L.) R.M. King & H. Rob. (Asteraceae)

Eupatorium maculatum (L.) E.E. Lamont (Asteraceae) (Jackson 1915; Kern 1919)

E. perfoliatum L. (Jackson 1915; Kern 1919)

E. purpureum (L.) E.E. Lamont (Snyder 1897; Jackson 1915; Kern 1919) PUR: 26729

Eleocharis obtusa (Willd.) Schult. (Cyperaceae) (Savile 1972; Jackson 1920; Kern 1919)

Eleocharis palustris (L.) Roem. & Schult. (Underwood 1893; Snyder 1896; Arthur 1899; Arthur 1909; Jackson 1915; Anderson and Anderson 1919; Kern 1919)

Puccinia ellisiana **Thüm.**

Schizachyrium scoparium (Michx.) Nash (Poaceae) (Jackson 1915)

Viola nuttallii Pursh (Violaceae)

V. palmata L. var. *cucullata* A. Gray (Underwood 1893)

V. sororia Willd.; (=*Viola papilionacea* Pursh) (Jackson 1915)

Puccinia emaculata **Schwein.**

Euphorbia corollata L. (Euphorbiaceae); (=*Tithymalopsis corollata* (L.) Klotzsch) (Jackson 1915)

E. marginata Pursh

Panicum capillare L. (Poaceae) (Underwood 1893; Snyder 1896; Arthur 1899; Jackson 1915; Anderson and Anderson 1919; Ramachar and Cummins 1965; Demers et al. 2017)

P. flexile (Gattinger) Scribn.

P. miliaceum L. (Jackson 1915; USDA 1960)

Panicum sp. (USDA 1960)

P. virgatum L. (Jackson 1915)

Puccinia epiphylla (L.) Wettst.

See: *Puccinia poarum* Nielsen

Puccinia eriophori **Thüm.**

Eriophorum angustifolium Honck. (Cyperaceae) (Jackson 1915)

E. virginicum L. (Jackson 1915)

Puccinia eumacrospora **Cummins**

Smilax tamnoides L. (=*S. hispida* Muhl. ex Torr.) (Smilacaceae)

Puccinia extensicola Plowr.

See: *Puccinia dioicae* Magnus, s.lat.

Puccinia extensicola var. *asteris* (Thüm.) Arthur

See: *Puccinia dioicae* Magnus, s.lat.

Puccinia extensicola var. *hieraciata* (Schwein.) Arthur

See: *Puccinia dioicae* Magnus, s.lat.

Puccinia extensicola var. *solidaginis* Arthur

See: *Puccinia dioicae* Magnus, s.lat.

Puccinia flaveriae H.S. Jacks.

See: *Puccinia melampodii* Dietel & Holw.

Puccinia flosculosorum Röhl.

See: *Puccinia hieracii* (Röhl.) H. Mart.

Puccinia fraxinata (Link) Arthur

See: *Puccinia sparganioides* Ellis & Barthol.

Puccinia galii (Pers.) Schwein.

See: *Puccinia punctata* Link and *P. punctata* var. *troglodytes* (Lindr.) Arthur

***Puccinia gentianae* (F. Strauss) Link**

Gentiana andrewsii Griseb. (Gentianaceae)

***Puccinia glechomatis* DC.**

Agastache nepetoides (L.) Kuntze (Lamiaceae) (Jackson 1915; Anderson and Anderson 1919)

Glechoma hederacea L. (Lamiaceae) (Scholler 2000; Böllmann and Scholler 2006)

***Puccinia globosipes* Peck**

Lycium barbarum L. (=*L. halimifolium* Mill.) (Solanaceae) (Jackson 1915); (=*halimifolium* Mill.; *vulgare* Dunal) (Cash 1952)

Puccinia globosum (Farl.) Kuntze

See: *Gymnosporangium globosum* Farl.

***Puccinia goldsbroughii* M. Abbasi & Aime**

Melica nitens (Scribn.) Nutt. ex Piper (Poaceae) (Abbasi and Aime 2016)

Melica sp. (Poaceae) (Abbasi and Aime 2016)

***Puccinia graminicola* (Burrill) Demers & Castl.**

Panicum virgatum L. (Poaceae) (Arthur 1899; Jackson 1920; Kenaley et al. 2018) PUR: 11737

Unknown grasses (Poaceae) (Underwood 1893)

***Puccinia graminis* Pers.**

Agrostis alba L. (Poaceae) (Jackson 1915; Anderson and Anderson 1919)

A. gigantea Roth

Agrostis sp. (Underwood 1893; Arthur 1899)

Alopecurus aequalis Sobol. (Poaceae) (USDA 1960); var. *aequalis Sobol.* (=*A. aristulatus* Michx.) (Jackson 1920)

A. pratensis L.

Arrhenatherum elatius (L.) P. Beauv. ex J. Presl & C. Presl (Poaceae) (Jackson 1915; USDA 1960)

Avena sativa L. (Poaceae) (Underwood 1893; Snyder 1896; Arthur 1899; Jackson 1915; Anderson and Anderson 1919)

Berberis canadensis Mill. (Berberidaceae)

B. vulgaris L. (Underwood 1893; Arthur 1899; Jackson 1915; Jackson 1920)

Bromus carinatus Hook. & Arn. (Poaceae)

B. ciliatus L.

B. kalmii A. Gray (=*Bromus purgans* L.) (Jackson 1920; USDA 1960)

B. marginatus Nees ex Steud. PUR: N5237 - Greenhouse

B. secalinus L. (Jackson 1915)

B. tomentellus Boiss. PUR: N5238 - Greenhouse

Cinna arundinacea L. (Poaceae) (Jackson 1915; USDA 1960)

Dactylis glomerata L. (Poaceae) (Snyder 1896; Arthur 1899; Jackson 1915; USDA 1960; Cooke 1986)

Elymus alaskanus subsp. *latiglumis* (Scribn. & J.G. Sm.) Á. Löve (Poaceae)

E. canadensis L. (Jackson 1920)

E. elymoides (Raf.) Swezey

E. repens (L.) Gould; (=*Agropyron repens* (L.) P. Beauv.) (Jackson 1920)

E. trachycaulus (Link) Gould ex Shinners

E. virginicus L. (Jackson 1920)

Festuca idahoensis Elmer (Poaceae)
Hordeum jubatum L. (Poaceae) (Snyder 1896; Arthur 1899; Jackson 1915) PUR: N1436
H. vulgare L. (Jackson 1915)
Hordeum sp. (Pipal 1915)
Koeleria macrantha (Ledeb.) Schult. (Poaceae)
Oryzopsis asperifolia Michx. (Poaceae) PUR: 62066 - Greenhouse
Pascopyrum smithii (Rydb.) Á. Löve (Poaceae)
Phalaris arundinacea L. (Poaceae)
Phleum pratense L. (Poaceae) (Jackson 1915; Pipal 1915; Anderson and Anderson 1919)
Poa alpina L. (Poaceae) PUR: 62060, 62062, N5161, N5262 - Greenhouse
P. annua L. PUR: N5263 - Greenhouse
P. compressa L. (Underwood 1893; Arthur 1899)
P. cusickii Vasey PUR: N5264 - Greenhouse
P. iridifolia Hauman PUR: N5265 - Greenhouse
P. pratensis L. (Underwood 1893; Arthur 1899; Abbasi et al. 2005)
P. secunda J. Presl PUR: 61061, 62067, 62069, N5272 N5280, N5281, N5282, N5283 - Greenhouse
P. palustris L. (USDA 1960)
Pseudoroegneria spicata (Pursh) Á. Löve (Poaceae)
Schedonorus pratensis (Huds.) P. Beauv. (Poaceae); (=*Festuca elatior* L.) (Jackson 1920)
Secale cereale L. (Poaceae) (Jackson 1915; Pipal 1915)
Trisetum spicatum (L.) K. Richt. (Poaceae) PUR: N5275 - Greenhouse
Triticum aestivum L. (Poaceae) (Ruhl et al. 1982; Abbasi et al. 2005); (=*Triticum vulgare* Vill.) (Underwood 1893; Snyder 1898; Arthur 1899; Jackson 1915; Pipal 1915; Anderson and Anderson 1919)
Host not reported (Van Hook 1910)

***Puccinia graminis* subsp. *graminicola* Z. Urb.**

Poa pratensis L. (Poaceae)
Schedonorus arundinaceus (Schreb.) Dumort., nom. cons. (=*S. phoenix* (Scop.) Holub) (Poaceae)

***Puccinia granulispora* Ellis & Galloway**

Allium cernuum Roth (Amaryllidaceae)

***Puccinia grindeliae* Peck**

Gutierrezia sarothrae (Pursh) Britton & Rusby (Asteraceae)
Lygodesmia juncea (Pursh) D. Don ex Hook. (Asteraceae)
Solidago canadensis L. (Asteraceae)

Puccinia grossulariae Lagerh.

See: *Puccinia caricina* DC., s.lat.

***Puccinia helianthi* Schwein.**

Helianthus annuus L. (Asteraceae) (Underwood 1893; Arthur 1899; Jackson 1915; Anderson and Anderson 1919)
H. cf. *hirsutus*
H. decapetalus L. (Jackson 1920); (=*H. tracheliifolius* Mill.) (Underwood 1893; Arthur 1899; Jackson 1915; Anderson and Anderson 1919)
H. divaricatus L. (Underwood 1893; Arthur 1899; Jackson 1915; Anderson and Anderson 1919; Emmons et al. 1960)

H. giganteus L. (Jackson 1915)
H. grosseserratus M. Martens (Underwood 1893; Snyder 1896; Arthur 1899; Jackson 1915; Anderson and Anderson 1919)
H. hirsutus Raf. (Jackson 1915; Anderson and Anderson 1919)
Helianthus × laetiflorus Pers. (pro sp.) [*pauciflorus × tuberosus*] (Jackson 1920; Emmons et al. 1960)
Helianthus × laetiflorus (=*H. scaberrimus* Elliott) (Jackson 1920)
H. maximiliani Schrad. (McCain et al. 1990)
H. microcephalus Torr. & A. Gray (McCain and Hennen 1981)
H. mollis Lam. (Jackson 1915)
H. occidentalis Riddell (Jackson 1915)
H. parviflorus Hornem. (Anderson and Anderson 1919)
H. pauciflorus Nuttall
H. petiolaris Nutt. (Jackson 1915)
Helianthus sp. (Underwood 1893)
H.s strumosus L. (Underwood 1893; Arthur 1899; Jackson 1915; Anderson and Anderson 1919)
H. tomentosus Michx.
H. tuberosus L. (Jackson 1915)
Helianthus × glaucus Small (pro sp.) [*divaricatus × microcephalus*]
Heliopsis helianthoides (L.) Sweet (Asteraceae) (Jackson 1915); var. *scabra* (Dunal) Fernald (=*Heliopsis scabra* Dunal) (Underwood 1893; Arthur 1899; USDA 1960)
Host not reported (Van Hook 1910)

Puccinia heliopsidis Schwein.
See: *Puccinia helianthi* Schwein.

***Puccinia hemerocallidis* Thüm.**
Hemerocallis sp. (Liliaceae) PUR: N1322 (Hernández et al. 2002)
H. cv. 'Strawberry Candy' PUR: 11602

***Puccinia heterospora* Berk. & M.A. Curtis**
Sida spinosa L. (Malvaceae)

***Puccinia heucherae* (Schwein.) Dietel**
Saxifraga pensylvanica L. (=*Micranthes pensylvanica* (L.) Haw.) (Saxifragaceae) (Jackson 1915)
Mitella diphylla L. (Saxifragaceae)

Puccinia hibisciata (Schwein.) Kellerm.
See: *Puccinia schedonnardi* Kellerm. & Swingle

***Puccinia hieracii* (Röhl.) H. Mart.**
Chrysanthemum sp. (Asteraceae)
Cnicus lanceolatus (L.) Willd. (=*Carduus lanceolatus* L.) (Asteraceae) (Underwood 1893; Arthur 1899) [Doubtful host]
Hieracium canadense Michx. (Asteraceae) (Jackson 1920)
H. gronovii L.
H. scabrum Michx. (Jackson 1915; Anderson and Anderson 1919)
Taraxacum dens-leonis Desf. (Asteraceae) (Snyder 1898) [Doubtful host]
T. officinale F.H. Wigg. (Underwood 1893; Snyder 1896; Anderson and Anderson 1919; Parmelee and Savile 1981); ssp. *officinale* (=*Leontodon taraxacum* L.) (Jackson 1915)
T. laevigatum (Willd.) DC. (=*T. erythrospermum* (Willd.) DC.) (Jackson 1915)

T. taraxacum H. Karst. (Arthur 1899)

Puccinia hieraciata (Schwein.) H.S. Jacks.

See: *Puccinia dioicae* Magnus, s.lat.

***Puccinia hordei* G.H. Otth**

Hordeum vulgare L. (Poaceae) (Jackson 1920)

Ornithogalum umbellatum L. (Asparagaceae)

Puccinia hydnoidea (Berk. & M.A. Curtis) Arthur

See: *Puccinia dioicae* Magnus, s.lat.

***Puccinia hydrophylli* Peck & Clinton**

Hydrophyllum virginianum L. (Hydrophyllaceae)

***Puccinia hyssopi* Schwein.**

Agastache nepetoides (L.) Kuntze (Lamiaceae)

***Puccinia impatientis* (Schwein.) Arthur**

Agrostis perennans (Walter) Tuck. (Poaceae) (Jackson 1915; Emmons et al. 1960)

Elymus canadensis L. (Poaceae) (Jackson 1915)

E. virginicus L. (Underwood 1893; Snyder 1896; Arthur 1899; Jackson 1915; Mains 1933); (=*E. striatus* Willd.) (Jackson 1915; Anderson and Anderson 1919)

E. hystrix L. (=*Hystrix patula* Moench) (USDA 1960); (=*H. hystrix* (L.) Millsp) (Jackson 1915)

Impatiens capensis Meerb. (Balsaminaceae); (=*I. fulva* Nutt.) (Underwood 1893)

I. pallida Nutt. (Snyder 1896; Jackson 1915; Van Hook 1928, 1929)

Impatiens sp.

I. capensis Meerb. (=*I. biflora* Walter) (Jackson 1915; Anderson and Anderson 1919)

Puccinia indusiata Dietel & Holw., ined.

See: *Puccinia cyperi* Arthur

Puccinia interstitialis Tranzsch.

See: *Gymnoconia peckiana* (Howe) Trotter

***Puccinia interveniens* (Peck) Bethel**

Achnatherum nelsonii subsp. *dorei* (Barkworth & Maze) Barkworth (Poaceae)

Sidalcea candida A. Gray (Malvaceae)

***Puccinia iridis* Wallr.**

Iris fulva Ker Gawl. (Iridaceae) (USDA 1960)

Iris sp. (USDA 1960)

I. versicolor L. (Jackson 1915; Anderson and Anderson 1919)

Iris × *filifolia-xiphium* Anon. (USDA 1960)

I. xiphioides Ehrh. (USDA 1960)

I. xiphium L. (USDA 1960)

Puccinia juniperi-virginianae (Schwein.) Arthur

See: *Gymnosporangium juniperi-virginianae* Schwein.

***Puccinia kansensis* Ellis & Barthol.**

Buchloe dactyloides (Nutt.) Engelm. (Poaceae)

Physalis heterophylla Nees (Solanaceae) (Jackson 1917)

P. longifolia var. *subglabrata* (Mack. & Bush) Cronquist

***Puccinia kuhniae* Schwein.**

Brickellia eupatorioides var. *eupatorioides* (L.) Shinners (=*Kuhnia eupatorioides* L.) (Asteraceae) (Underwood 1893; Snyder 1896; Arthur 1899; Jackson 1915; Jackson 1920; Cummins et al. 1969)

Kuhnia sp. (Asteraceae) (Cummins 1978)

***Puccinia laschii* var. *laschii* Lagerh.**

Arctium minus (Hill) Bernh. (Asteraceae) [Doubtful host]

Cirsium sp. (Asteraceae)

C. hillii (Canby) Fernald (=*C. pumilum* subsp. *hillii* (Canby) J.W. Moore & Frankton (Savile 1970)

C. undulatum (Nutt.) Spreng. [as '*undulatus*'] (Jackson 1920)

***Puccinia lateripes* Berk. & Ravenel**

Ruellia caroliniensis subsp. *ciliosa* var. *cinerascens* (Fernald) Kartesz & Gandhi (=*R. ciliosa* Pursh) (Acanthaceae) (Jackson 1915; Anderson and Anderson 1919; Laundon 1963)

R. strepens L. (Underwood 1893; Arthur 1899; Jackson 1915; Anderson and Anderson 1919; Laundon 1963)

***Puccinia lateripes* var. *lateripes* Berk. & Ravenel**

Ruellia caroliniensis subsp. *ciliosa* var. *cinerascens* (Fernald) Kartesz & Gandhi (=*R. ciliosa* Pursh) (Acanthaceae) (Laundon 1963)

***Puccinia lateripes* var. *strepentis* G.F. Laundon**

Ruellia strepens L. (Acanthaceae) (Snyder 1896; Laundon 1963)

***Puccinia leptochloae* Arthur & Fromme**

Talinum paniculatum (Jacq.) Gaertn. (Portulacaceae)

***Puccinia liatridis* Bethel.**

Liatris pycnostachya Michx. (Asteraceae) (USDA 1960)

***Puccinia liliacearum* Duby**

Ornithogalum umbellatum L. (Asparagaceae) (Abbasi et al. 2016b)

***Puccinia lithospermi* Ellis & Kellerm.**

Evolvulus nuttalliana R & S. (Convolvulaceae)

***Puccinia lobeliae* W.R. Gerard**

Lobelia siphilitica L. (Campanulaceae) (Underwood 1893; Snyder 1896; Arthur 1899; Jackson 1915; Anderson and Anderson 1919)

***Puccinia longipes* var. *brevipes* (Dietel) Z. Urb.**

Vernonia altissima (Asteraceae) (Arthur 1934)

***Puccinia longipes* var. *longipes* Lagerh.**

Vernonia fasciculata Michx. (Asteraceae) (Underwood 1893; Arthur 1899; Jackson 1915; Cash 1952)

V. gigantea (Walter) Trel. (Urban 1971)

Vernonia sp. (Urban 1971)

Puccinia ludibunda Ellis & Everh.

See: *Puccinia dioicae* Magnus, s.lat.

***Puccinia ludovicianae* Fahrend.**

Artemisia ludoviciana Nutt. (Asteraceae)

Puccinia lysimachiata (Link) Kern

See: *Puccinia caricina* var. *limosae* (Magnus) Jørst.

***Puccinia magelhaenica* Peyr.**

Berberis fendleri A. Gray (Berberidaceae)

Koeleria macrantha (Ledeb.) Schult. (Poaceae)

Mahonia sp. (Berberidaceae)

***Puccinia magnusiana* Körn.**

Anemone canadensis L. (Ranunculaceae)

Puccinia majanthae Arthur & Holw.

See: *Puccinia sessilis* J. Schröt.

***Puccinia malvacearum* Bertero ex Mont.**

Alcea rosea L. (Malvaceae) (Jackson 1915); [as '*Althaea*'] (Ruhl et al. 1981, 1982, 1983; Pipal 1915; Anderson and Anderson 1919)

Malva neglecta cf. Wallr.

M. neglecta Wallr. (Malvaceae) (McCain and Hennen 1981)

M. rotundifolia L. (Jackson 1915; Lee 1929)

Host not reported (Van Hook 1910)

***Puccinia mariae-wilsoniae* G.W. Clinton [as *'mariae-wilsoni'*]**

Claytonia virginica L. (Portulacaceae) (Jackson 1915; Anderson and Anderson 1919; Arthur 1934)

Host not reported (Van Hook 1934)

***Puccinia marylandica* Lindr.**

Sanicula canadensis L. (Apiaceae) (Underwood 1893; Arthur 1899; Jackson 1915; Anderson and Anderson 1919; Jackson 1920; Emmons et al. 1960)

S. marilandica L. (USDA 1960)

Sanicula sp. (Cooke 1967)

Puccinia maydis Carr.

See: *Puccinia sorghi* Schwein.

***Puccinia melampodii* Dietel & Holw.**

Calendula officinalis L. (Asteraceae) (USDA 1960)

***Puccinia melicae* P. Syd. & Syd.**

Melica mutica Walter (Poaceae) (Jackson 1915)

***Puccinia menthae* Pers.**

Blephilia ciliata (L.) Benth. (Lamiaceae) (Jackson 1915; USDA 1960)

B. hirsuta (Pursh) Benth. (Underwood 1893; Snyder 1896; Arthur 1899; Jackson 1915; Anderson and Anderson 1919; USDA 1960)

Cunila origanoides (L.) Britton (Lamiaceae) (Jackson 1915; Arthur 1899; Emmons et al. 1960); (=*C. mariana* L.) (Underwood 1893)

Hedeoma pulegioides (L.) Pers. (Lamiaceae)

Koellia flexuosa MacMill. (Lamiaceae) (Jackson 1920)

Mentha arvensis L. (=*M. canadensis* L.) (Lamiaceae) (Underwood 1893; Arthur 1899; Jackson 1915; Anderson and Anderson 1919)

Mentha × *piperita* L. (pro sp.) [*aquatica* × *spicata*]

M. spicata L. (Jackson 1915)

Monarda clinopodia L. (Lamiaceae)

M. didyma L.

M. fistulosa L. (Underwood 1893; Snyder 1896; Arthur 1899; Jackson 1915; Anderson and Anderson 1919; Emmons et al. 1960; Cooke 1967)

M. punctata L. (Jackson 1920)

Monarda sp. (Underwood 1893)

Pycnanthemum flexuosum (Walter) Britton, Sterns & Poggenb. (Lamiaceae)

P. lanceolatum Pursh (Underwood 1893)

P. muticum (Michx.) Pers. (Underwood 1893)

Pycnanthemum sp. (Snyder 1896)

P. virginianum (L.) T. Dur. & B.D. Jacks. ex B.L. Rob. & Fernald; (=*Koellia virginiana* (L.) MacMill.) (Arthur 1899; Jackson 1915)

P. verticillatum var. *pilosum* (Nutt.) Cooperr. (=*P. pilosum* Nutt.); (=*Koellia pilosa* (Nutt.) Britton) (Arthur 1899; Jackson 1915)

***Puccinia minutissima* Arthur**

Decodon verticillatus (L.) Elliott (Lythraceae) (Jackson 1915; USDA 1960)

Carex lasiocarpa Ehrh. (Cyperaceae) (Jackson 1915)

***Puccinia modiolae* P. Syd & Syd.**

Althaea sp. (Malvaceae) (Aime and Abbasi 2018)

***Puccinia monoica* Arthur**

Arabis sp. (Brassicaceae)

Koeleria macrantha (Ledeb.) Schult. (Poaceae)

Trisetum spicatum (L.) K. Richt. (Poaceae)

***Puccinia montanensis* Ellis**

Elymus canadensis L. (Poaceae) (Jackson 1915; USDA 1960; Cummins and Greene 1966)

E. hystrix L.

Elymus sp.

Puccinia muhlenbergiae Arthur & Holw.

See: *Puccinia schedonnardi* Kellerm. & Swingle

Puccinia nigrovelata Ellis & Tracy

See: *Puccinia canaliculata* (Schwein.) Lagerh.

Puccinia nolitangeris Corda [reported as '*nolitangere*']

See: *Puccinia argentata* (Schultz) G. Winter

***Puccinia novopanici* Demers, Miao Liu & Hambl.**

Panicum virgatum (Poaceae) PUR: N22686

***Puccinia obliqua* Berk. & M.A. Curtis**

Gonolobus suberosus var. *granulatus* (Scheele) Krings & Q.Y. Xiang (Apocynaceae)

***Puccinia obscura* J. Schröt.**

Luzula bulbosa (Alph. Wood) Smyth & Smyth (Juncaceae) (McCain et al. 1990)

L. campestris (L.) DC. (=*Juncoides campestre* (L.) Kuntze) (Jackson 1915; Anderson and Anderson 1919)

L. multiflora subsp. *frigida* (Buchenau) Krecz. (=*L. intermedia* (Thuill.) A. Nelson)

L. multiflora (Ehrh.) Lej.

***Puccinia obtecta* Peck**

Bidens connata Muhl. ex Willd. (Asteraceae)

B. frondosa L. (Jackson 1920; USDA 1960; Savile 1972)

B. coronata (L.) Britton (=*B. trichosperma* (Michx.) Britton) (Jackson 1920)

Schoenoplectus lacustris (L.) Palla (=*Scirpus lacustris* L.) (Cyperaceae) (Arthur 1899)

S. pungens (Vahl) Palla

S. tabernaemontani (C.C. Gmel.) Palla (=*Scirpus validus* Vahl) (Jackson 1915; Anderson and Anderson 1919; Savile 1972)

S. americanus (Pers.) Volkart ex Schinz & R. Keller (=*Scirpus americanus* Pers.) (Jackson 1915; Savile 1972)

***Puccinia orbicula* Peck & Clinton**

Prenanthes alba L. (Asteraceae) (Underwood 1893; Snyder 1896); (=*Nabalus albus* (L.) Hook.) (Arthur 1899; Jackson 1915)

Prenanthes sp. (Asteraceae)

***Puccinia pammelii* (Trel.) Arthur**

Euphorbia corollata (Kenaley et al. 2018)

Puccinia panici Dietel

See: *Puccinia emaculata* Schwein.

Puccinia patruelis Arthur

See: *Puccinia dioicae* Magnus, s.lat.

***Puccinia pattersoniae* P. Syd. & Syd.**

Tripsacum dactyloides (L.) L. (Poaceae)

Puccinia peckii (De Toni) Kellerm.

See: *Puccinia dioicae* Magnus, s.lat.

Puccinia peckiana Howe

See: *Gymnoconia peckiana* (Howe) Trotter

***Puccinia persistens* Plowr., s.lat.**

Actaea racemosa L. (Ranunculaceae)

Anemone virginiana L. (Ranunculaceae)

Anemonella thalictroides (L.) Eames & B. Boivin (Ranunculaceae) (USDA 1960)

Aquilegia canadensis L. (Ranunculaceae)

Aquilegia sp. (Underwood 1893)

***Puccinia persistens* subsp. *agropyri* (Ellis & Everh.) J. Marková & Z. Urb.**

Bromus kalmii A. Gray (=*purgans* auct. non L.) (Poaceae) (USDA 1960)

Clematis drummondii Torr. & A. Gray (Ranunculaceae)

C. hirsutissima var. *scottii* (Porter) Erickson

C. ligusticifolia Nutt.

C. virginiana L.

Elymus hystrix L. (=*Hystrix patula* Moench) (Poaceae) (USDA 1960)

***Puccinia persistens* subsp. *triticina* (Erikss.) Z. Urb. & J. Marková**

Triticum aestivum L. (Poaceae) (Ruhl et al. 1981, 1982); (=*T. vulgare* Vill.) Poaceae (Jackson 1915; Pipal 1915; Anderson and Anderson 1919)

***Puccinia phragmitis* var. *phragmitis* (Schumach.) Körn.**

Rumex crispus L. (Polygonaceae) (Arthur 1902)

R. obtusifolius L. (Arthur 1902)

***Puccinia physostegiae* Peck & Clinton**

Physostegia parviflora Nutt. ex A. Gray (Lamiaceae)

P. virginiana (L.) Benth. (Arthur 1899; Jackson 1915; USDA 1960; Cooke 1967); [reported as '*virginica*'] (Snyder 1896)

***Puccinia pimpinellae* (F. Strauss) Link**

Chaerophyllum procumbens (L.) Crantz (Apiaceae) (McCain et al. 1990)

Osmorhiza claytonii (Michx.) C.B. Clarke (Apiaceae)

O. longistylis (Torr.) DC. (Jackson 1920)

***Puccinia poae-nemoralis* G.H. Otth**

Alopecurus aequalis Sobol. (Poaceae) (USDA 1960)

A. geniculatus L. (Jackson 1915; USDA 1960) PUR: 23412

Catabrosa aquatica (L.) P. Beauv. (Poaceae) (USDA 1960)

Poa pratensis L. (Poaceae) (McCain et al. 1990)

Poa sp.

***Puccinia poarum* Nielsen**

Festuca sp. (Poaceae)

Hymenoxys hoopesii (A. Gray) Bierner (Asteraceae)

Koeleria macrantha (Ledeb.) Schult. (=*nitida* Nutt., nom. utique rej.) (Poaceae) (McCain et al. 1990)
Liatris punctata Hook. (Asteraceae)
L. scariosa (L.) Willd.
L. spheroidea Michx.
L. spicata (L.) Willd.
Poa pratensis L. (Poaceae) (Snyder 1898; Arthur 1899; Jackson 1915; Pipal 1915; Anderson and Anderson 1919)

Puccinia poculiformis (Jacq.) Wettst.
See: *Puccinia graminis* Pers.

Puccinia podophylli Schwein.
See: *Allodus podophylli* (Schwein.) Arthur

***Puccinia polemonii* Dietel & Holw.**
Polemonium reptans L. (Polemoniaceae) (Jackson 1920; USDA 1960)

***Puccinia polygoni-amphibii* Pers.**
Geranium maculatum L. (Geraniaceae) (Jackson 1915)
Polygonum amphibium L. (Polygonaceae); var. *emersum* Michx. (=*Persicaria amphibia* (L.) Gray & *P. emersum* (Michx.) Britton) (Arthur 1899; Jackson 1915); var. *emersum* (=*Persicaria muehlenbergii* (S. Watson) Small & *P. muehlenbergii* S. Watson) (Underwood 1893; Jackson 1915; Anderson and Anderson 1919)
P. convolvulus L. (Arthur 1899; Anderson and Anderson 1919); (=*Tiniaria convolvulus* (L.) Webb & Moq.) (Jackson 1915)
P. erectum L. (Snyder 1896)
P. hydropiperoides Michx. (Snyder 1898; Arthur 1899); (=*Persicaria hydropiperoides* (Michx.) Small) (Jackson 1915)
P. lapathifolium L.; (=*Persicaria lapathifolia* (L.) Gray) (Jackson 1915)
P. pensylvanicum L. (=*pensylvanicum* var. *laevigatum* Fernald) (Arthur 1899; McCain et al. 1990); (=*Persicaria pensylvanica* (L.) Small) (Jackson 1915)
P. punctatum Elliott (Arthur 1899); var. *punctatum* (=*P. acre* Kunth) (Underwood 1893; Anderson and Anderson 1919); (=*Persicaria punctata* (Elliott) Small) (Jackson 1915)
P. scandens L. (Arthur 1899; Cooke 1967); (=*Tiniaria scandens* (L.) Small) (Jackson 1915)
Polygonum sp.
Polygonum virginianum L. (Cooke 1967)
P. amphibium var. *stipulaceum Coleman* (=*P. natans* L.)

***Puccinia polysora* Underw.**
Zea mays L. (Poaceae) (Ullstrup and Lavoilette 1959; Hanlin et al. 1978; Schall et al. 1983)

Puccinia prenanthis (Pers.) Fuckel
See: *Puccinia orbicula* Peck & Clinton

Puccinia pringsheimiana Kleb.
See: *Puccinia caricina* DC., s.lat.

***Puccinia procera* Dietel & Holway**
Phacelia distans Benth. (Hydrophyllaceae)

***Puccinia proserpinacae* Farl.**
Proserpinaca palustris L. (Haloragaceae)

Puccinia pruni-spinosae Pers., sensu Anderson and Anderson (1919)
See: *Tranzschelia arthurii* Tranzschel & M.A. Litv.

***Puccinia pseudostriiformis* M. Abbasi, Hedjar. & M. Scholler**

Poa compressa L. (Poaceae)

P. nemoralis L.

P. pratensis L.

P. secunda J. Presl

***Puccinia punctata* Link**

Galium asprellum Michx. (Rubiaceae) (Underwood 1893; Arthur 1899; Jackson 1915)

G. concinnum Torr. & A. Gray (Underwood 1893; Arthur 1899; Jackson 1915; Anderson and Anderson 1919; Cooke 1967)

Galium sp.

***Puccinia punctata* var. *troglodytes* (Lindr.) Arthur**

Galium triflorum Michx. (Rubiaceae) (Underwood 1893; Arthur 1899; Jackson 1915; Anderson and Anderson 1919; Lee 1929; Emmons et al. 1960)

***Puccinia punctiformis* (F. Strauss) Röhl.**

Cirsium arvense (L.) Scop. (Asteraceae) (McCain et al. 1990)

***Puccinia purpurea* Cooke**

Sorghum bicolor (L.) Moench (Poaceae) (Ullstrup and Lavoilette 1959); subsp. *bicolor* (L.) Moench (=*S. vulgare* Pers.) (Ullstrup and Lavoilette 1959); subsp. *drummondii* (Nees ex Steud.) de Wet & Harlan (=*S. sudanense* (Piper) Stapf) (Ullstrup and Lavoilette 1959)

S. halepense (L.) Pers. (Ullstrup and Lavoilette 1959)

Puccinia pustulata Arthur

See: *Puccinia andropogonis* Schwein.

***Puccinia pygmaea* Erikss.**

Calamagrostis × acutiflora (Schrad.) Rchb. (Poaceae)

Puccinia ranunculi Seym., Nom. illegit.

See: *Tranzschelia pseudofusca* M. Scholler & M. Abbasi

***Puccinia recondita* Roberge ex Desm. s.str.**

Anchusa arvensis (L.) M. Bieb. (Boraginaceae)

A. capensis Thunb. PUR: 23972, 65619, 6580 – Greenhouse & Hort. Garden

A. officinalis L. (USDA 1960)

Anchusa sp. PUR: 65620 – Greenhouse

Hordeum jubatum L. (Poaceae) N1436

Secale cereale L. (Poaceae) (Snyder 1896; Arthur 1899; Arthur 1909; Jackson 1915; Anderson and Anderson 1919; Pipal 1915; USDA 1960)

Puccinia recondita Roberge ex Desm., sensu Cummins 1971, nom. ambig.

See: *Puccinia persistens* Plowr., s.lat.; *P. impatientis* (Schwein.) Arthur; *P. bromina* Erikss. s.lat.

Avena sativa L. (Poaceae) (USDA 1960) [Doubtful host]

Bromus japonicus Thunb. (Poaceae) (USDA 1960)

B. kalmii A. Gray (=*purgans* auct. non L.) (USDA 1960; Cooke 1967)

Notes: records on *Bromus* species probably refer to *Puccinia bromina*

Elymus canadensis L. (Poaceae)

E. hystrix L. (=*Hystrix patula* Moench) (Emmons et al. 1960; USDA 1960)

E. repens (L.) Gould

E. trachycaulus (Link) Gould ex Shinners

E. villosus Muhl. ex Willd.

E. virginicus L.
Glyceria grandis S. Watson (Poaceae) (USDA 1960) PUR: 25351
Note: probably refers to *Puccinia persistens* subsp. *agropyri*
Pascopyrum smithii (Rydb.) A. Löve (Poaceae)
Ranunculus cymbalaria Pursh (Ranunculaceae)
Note: Probably refers to *Puccinia eatoniae*
Thalictrum alpinum L. (Ranunculaceae)
T. delavayi Franch.
T. dioicum L.
T. flavum L.
T. glaucum Sieber ex Lecoy.
T. pubescens Pursh
Thalictrum sp.
T. delavayi var. *delavayi* Franch. (=*T. dipterocarpum* Franch.)
Note: records on *Thalictrum* spp. probably refer to *Puccinia cockerelliana* or *P. persistens*.
Puccinia rhamni (Pers. ex J.F. Gmel.) Wettst.
See: *Puccinia coronata* Corda, s.lat. and *P. coronata* var. *avenae* f. sp. *avenae* Urban & Marková
Puccinia rubella (Pers. ex J.F. Gmel.) Arthur
See: *Puccinia phragmitis* var. *phragmitis* (Schumach.) Tul.
Puccinia rubigo-vera (DC.) G. Winter, nom. ambig.
This is an ambiguous name used by Underwood (1893) and Snyder (1897)
See: *Puccinia impatientis* (Schwein.) Arthur, *P. recondita* Roberge ex Desm. s.str. and *P. schedonnardi* Kellerm. & Swingle
Avena sativa L. (Poaceae) (Underwood 1893) [Doubtful host]
Puccinia rubigo-vera var. *agropyrina* (Erikss.) Arthur
See: *Puccinia persistens* subsp. *agropyri* (Ellis & Everh.) J. Marková & Z. Urb.
Puccinia rubigo-vera var. *apocrypta* (Ellis & Tracy) Arthur
See: *Puccinia apocrypta* Ellis & Tracy
Puccinia rubigo-vera f.sp. *arthuri* Mains
See: *Puccinia persistens* subsp. *agropyri* (Ellis & Everh.) J. Marková & Z. Urb.
Puccinia rubigo-vera f.sp. *impatiensis* Mains
See: *Puccinia impatientis* (Schwein.) Arthur
Puccinia rubigo-vera f.sp. *indianensis* Mains
See: *Puccinia impatientis* (Schwein.) Arthur
Puccinia rubigo-vera f. *secalis* (Erikss. & Henn.) Mains
See: *Puccinia recondita* Roberge ex Desm. s.str.
Puccinia ruelliae (Berk. & Broome) Lagerh.
See: *Puccinia lateripes* Berk. & Ravenel
***Puccinia sambuci* (Schwein.) Arthur**
Carex aureolensis Steud. (=*C. frankii* Kunth) (Cyperaceae) (Jackson 1915; Anderson and Anderson 1919; Schoknecht 1981) PUR: 30297
C. lupuliformis Sartwell ex Dewey (Jackson 1920)
C. lupulina Muhl. ex Willd. (Jackson 1915)
C. lurida Wahlenb. (Arthur 1909; Jackson 1915)
Carex sp. (Underwood 1893; Snyder 1896; Arthur 1899)
C. trichocarpa Muhl. ex Willd. (Jackson 1915; Anderson and Anderson 1919)

Sambucus racemosa L. (Caprifoliaceae)
S. nigra subsp. *canadensis* (L.) R. Bolli (=*S. canadensis* L.) (Underwood 1893; Jackson 1915; Anderson and Anderson 1919; Van Hook 1928)
S. racemosa var. *racemosa* L. (=*S. pubens* Michx.) (Jackson 1920; USDA 1960)

Puccinia saniculae Grev.
See: *Puccinia marylandica* Lindr.

***Puccinia schedonnardi* Kellerm. & Swingle**
Callirhoe involucrata (Torr. & A. Gray) A. Gray (Malvaceae)
Melica mutica Walter (Poaceae) (Jackson 1920)
Melica sp. L. (USDA 1960)
Muhlenbergia mexicana (L.) Trin. (Poaceae) (Jackson 1915)
M. racemosa (Michx.) Britton, Sterns & Poggenb. (Jackson 1920)
M. schreberi J.F. Gmel. (Jackson 1915; Emmons et al. 1960; Cummins and Greene 1961); (as *M. diffusa*) (Underwood 1893) PUR: 21416
M. sobolifera (Muhl. ex Willd.) Trin. (Jackson 1920)
M. sylvatica (Torr.) Torr. ex A. Gray (=*M. umbrosa* Scribn.) (Snyder 1896; Jackson 1915)
M. tenuiflora (Willd.) Britton, Sterns & Poggenb. (Jackson 1915; Anderson and Anderson 1919)
Napaea dioica L. (Malvaceae) (Jackson 1915)
Sphaeralcea angustifolia (Cav.) G. Don (Malvaceae)
S. coccinea (Nutt.) Rydb.
S. incana Torr. ex A. Gray
Triodia seslerioides Benth. ex Vasey (Poaceae) (Snyder 1896)

Puccinia schroeteriana Plowr. & Magnus
See: *Puccinia dioicae* Magnus, s.lat.

***Puccinia sessilis* J. Schröt.**
Iris versicolor L. (Iridaceae) (Jackson 1920; USDA 1960)
Phalaris arundinacea L. (Poaceae) (Jackson 1915)

***Puccinia seymeriae* Burrill**
Dasistoma macrophylla (Nutt.) Raf. (=*Afzelia macrophylla* (Nutt.) Kuntze) (Orobanchaceae) (Jackson 1915)

***Puccinia seymouriana* Arthur**
Apocynum cannabinum L. (Apocynaceae) (Jackson 1920; USDA 1960)
Asclepias syriaca L. (Apocynaceae)
Cephalanthus occidentalis L. (Rubiaceae) (Jackson 1915)
Spartina pectinata Bosc ex Link (Poaceae); (=*S. michauxiana* Hitchc.) (Jackson 1915)
S. cynosuroides (L.) Roth (Arthur 1909)

***Puccinia silphii* Schwein.**
Silphium integrifolium Michx. (Asteraceae) (Jackson 1915)
S. perfoliatum L. (Jackson 1915; Anderson and Anderson 1919; Van Hook 1923)
Silphium sp. (Underwood 1893; Arthur 1899; Jackson 1915)
S. terebinthinaceum Jacq.

***Puccinia smilacis* Schwein.**
Apocynum cannabinum L. (Apocynaceae)
Smilax bona-nox L. (Smilacaceae) (Jackson 1920)
S. glauca Walter (Jackson 1915)
S. rotundifolia L.

S. tamnoides L. (=*hispida* Muhl. ex Torr.) (Emmons et al. 1960)

***Puccinia sorghi* Schwein.**

Oxalis corniculata L. (Oxalidaceae) (Anderson and Anderson 1919; USDA 1960)
O. stricta L. (USDA 1960); (=*Xanthoxalis cymosa* (Small) Small) (Jackson 1915)
Zea mays L. (Poaceae) (Underwood 1893; Snyder 1898; Arthur 1899; Jackson 1915; Pipal 1915; Anderson and Anderson 1919; Ullstrup and Lavoilette 1959; Hanlin et al. 1978; Ruhl et al. 1980, 1981, 1982)
Zea mexicana (Schrad.) Kuntze (Poaceae)
Host not reported (Van Hook 1910)

***Puccinia sparganioidis Ellis* & Barthol.**

Fraxinus americana L. (Oleaceae) (McCain and Hennen 1981)
F. pennsylvanica Marshall (=*F. lanceolata* Borkh.) (Arthur 1902)
F. profunda (Bush) Bush (Jackson 1920)
Fraxinus sp. (Ruhl et al. 1981)
F. viridis F. Michx. (Van Hook 1927)
Spartina pectinata Bosc ex Link (Poaceae); (=*S. michauxiana* Hitchc.) (Jackson 1915)

***Puccinia splendens* Vize**

Hymenoclea monogyra Torr. & A. Gray (Asteraceae)

***Puccinia sporoboli* Arthur**

Allium cernuum Roth (Amaryllidaceae)
A. drummondii Regel
Lilium philadelphicum L. (Liliaceae)
Sporobolus cryptandrus (Torr.) A. Gray (Poaceae) (Snyder 1896)

***Puccinia sporoboli* var. *robusta* Cummins & H.C. Greene**

Calamovilfa longifolia (Hook.) Scribn. (Poaceae) (Cummins and Greene 1961)
Maianthemum racemosum (L.) Link (Asparagaceae)
M. stellatum (L.) Link (=*Smilacina stellata* (L.) Desf.) (Cummins and Greene 1961)
Yucca glauca Nutt. (Agavaceae)

***Puccinia stipae* Arthur**

Grindelia squarrosa (Pursh) Dunal (Asteraceae)
Gutierrezia sarothrae (Pursh) Britton & Rusby (Asteraceae)
Hesperostipa spartea (Trin.) Barkworth (Poaceae)
Senecio spartioides Torr. & Gray (Asteraceae)
Symphyotrichum ericoides (L.) G.L. Nesom (Asteraceae)
S. novae-angliae (L.) G.L. Nesom
S. porteri (A. Gray) G.L. Nesom

***Puccinia striiformis* Westend.**

Triticum aestivum L. (Poaceae) (McCain and Hennen 1981; Ruhl et al. 1983; Abbasi et al. 2005)
Also see: '*Puccinia pseudostriiformis* M. Abbasi, Hedjar. & M. Scholler' for reports on *Poa* spp.

***Puccinia subnitens* Dietel**

Abronia fragrans Nutt. ex Hook. (Nyctaginaceae)
Atriplex prostrata Bouchér ex DC. (=*A. hastata* L.) (Chenopodiaceae)
Capsella bursa-pastoris (L.) Medik. (Brassicaceae)
Chenopodium album L. (Chenopodiaceae) (USDA 1960)
Cleome hassleriana Chod. (=*C. spinosa* auct. non Jacq.) (Capparidaceae) (USDA 1960)

C. serrulata Pursh (USDA 1960)
Descurainia pinnata var. *brachycarpa* (Richardson) Detling (Brassicaceae)
Erysimum capitatum (Dougl. ex Hook.) Greene (Brassicaceae)
Lepidium densiflorum Schrad. (Brassicaceae)
Lepidium sp. (USDA 1960)
L. virginicum L.
Polygonum aviculare L. (Polygonaceae)
Sarcobatus vermiculatus (Hook.) Torr. (Chenopodiaceae)

***Puccinia substerilis* Ellis & Everh.**
Nassella viridula (Trin.) Barkworth (Poaceae)

***Puccinia substriata* Ellis & Barthol.**
Paspalum setaceum Michx. (=*P. setaceum* var. *muhlenbergia* (Nash) D.J. Banks) (Poaceae)
Solanum carolinense L. (Solanaceae)

***Puccinia substriata* var. *imposita* (Arthur) Ramachar & Cummins**
Solanum carolinense L. (Solanaceae)
S. melongena L.

Puccinia tanaceti DC., sensu Underwood (1893) [also followed by Snyder (1897)]
See: *Puccinia helianthi* Schwein.

***Puccinia tanaceti* var. *tanaceti* DC.**
Chrysanthemum × *morifolium* Ramat. (pro sp.) (Asteraceae)
C. morifolium (Ramat.) Hemsl. var. *sinense* (Sabine) Makino (=*C. sinense* Sabine) (Jackson 1915)
Chrysanthemum sp. (Pipal 1915)

***Puccinia tanaceti* var. *dracunculina* (Fahrend.) Cummins**
Artemisia (=*Dracunculoides* L.) *dracunculus* L. (Asteraceae)

Puccinia taraxaci Plowr.
See: *Puccinia hieracii* (Röhl.) H. Mart.

***Puccinia tenuis* (Schwein.) Burrill**
Ageratina altissima var. *altissima* (L.) R.M. King & H. Rob. (=*Eupatorium rugosum* Houtt.) (Asteraceae) (Emmons et al. 1960); var. *roanensis* (Small) Clewell & Woot. (=*E. urticifolium* Reichard) (Jackson 1915)
Ageratum altissimum (=*E. ageratoides* L.f.) (Asteraceae) (Underwood 1893; Snyder 1896; Arthur 1899)

Puccinia thalictri Chevall.
See: *Tranzschelia thalictri* (Chev.) Dietel

***Puccinia thelypodii* Cummins**
Guillenia lasiophylla (Hook. & Arn.) Greene (=*Thelypodium lasiophyllum* (Hook. & Arn.) Greene) (Brassicaceae)

Puccinia thompsonii Hume
See: *Puccinia sambuci* (Schwein.) Arthur

***Puccinia tomipara* Trel.**
Bromus ciliatus L. (Poaceae) (Anderson and Anderson 1919)
Thalictrum thalictroides (L.) Eames & B. Boivin (=*Anemonella thalictroides* (L.) Spach) (Ranunculaceae) (Anderson and Anderson 1919)

Puccinia triodiae Ellis & Barthol.
See: *Puccinia schedonnardi* Kellerm. & Swingle

***Puccinia tripsaci* Dietel & Holw.**
Ceanothus americanus L. (Rhamnaceae)

Tripsacum sp. (Poaceae) (USDA 1960)

Puccinia tritici auct. non Oerst.

See: *Puccinia persistens* subsp. *triticina* (Erikss.) Z. Urb. & J. Marková

Puccinia triticina Erikss.

See: *Puccinia persistens* subsp. *triticina* (Erikss.) Z. Urb. & J. Marková

Puccinia troglodytes Lindr. [as '*triglodytes*' by Lee (1929)]

See: *Puccinia punctata* var. *troglodytes* (Lindr.) Arthur

***Puccinia tumidipes* Peck**

Lycium halimifolium Mill. (= *L. barbarum* L.) (Solanaceae) (Otálora and Berndt 2018)

Puccinia urticae Lagerh.

See: *Puccinia urticata* F. Kern.

***Puccinia urticata* F. Kern**

Carex bullata Schkuhr ex Willd. (Cyperaceae) (Arthur 1899)

C. emoryi Dewey (Jackson 1920)

C. frankii Kunth (Arthur 1899)

C. lacustris Willd. (Jackson 1915)

C. lurida Wahlenb. (Arthur 1899)

C. pensylvanica Lam. (Arthur 1899)

C. siccata Dewey (=*C. foenea* Willd.) (Arthur 1899)

C. stipata Muhl. ex Willd.

C. straminea Willd. ex Schkuhr (Arthur 1899)

C. stricta Lam. (Jackson 1915) PUR: 66442

C. trichocarpa Muhl. ex Willd. (Jackson 1920)

C. virescens Muhl. ex Willd. (Arthur 1899)

Dulichium arundinaceum (L.) Britton (Arthur 1899)

Urtica dioica L. ssp. *gracilis* (Aiton) Seland. (=*U. gracilis* Aiton) (Urticaceae) (Arthur 1899; Jackson 1915)

Puccinia verbenicola Arthur

See: *Puccinia vilfae* Arthur & Holw.

***Puccinia verbesinae* Schwein.**

Verbesina occidentalis (L.) Walter (Asteraceae) (USDA 1960)

Puccinia vernoniae Schwein.

See: *Puccinia longipes* var. *brevipes* (Dietel) Z. Urb.

Puccinia vernoniae var. *caulicola* Ellis & Everh.

See: *Puccinia longipes* var. *longipes* Lagerh.

***Puccinia veronicarum* DC., s.lat.**

Veronicastrum virginicum (L.) Farw. (Plantaginaceae) PUR: N6188

Puccinia verrucosa Link

See: *Puccinia glechomatis* DC.

***Puccinia vexans* Farl.**

Bouteloua curtipendula (Michx.) Torr. (Poaceae); (=*Atheropogon curtipendulus* (Michx.) Fourn.) (Jackson 1915; Jackson 1920)

Fouquieria splendens Engelm. (Fouquieriaceae) PUR: N5514 - Greenhouse

***Puccinia vilfae* Arthur & Holw.**

Sporobolus compositus (Poir.) Merr. (Poaceae); (=*S. asper* (P. Beauv.) Kunth) (Arthur 1899; Jackson 1915; Cummins and Greene 1961)

Verbena hastata L. (Verbenaceae) (Jackson 1920)

V. stricta Vent. (Snyder 1896; Jackson 1915)

V. urticifolia L.
Verbena × illicita Moldenke *[stricta × urticifolia]* (McCain et al. 1990)

***Puccinia violae* (Schumach.) DC.**

Viola blanda Willd. (Violaceae) (Anderson and Anderson 1919); var. *palustriformis* A. Gray (=*V. incognita* var. *forbesii* Brainerd)
V. cucullata Aiton (=*V. obliqua* Hill) (Arthur 1899; Arthur and Holway 1901; Anderson and Anderson 1919)
V. eriocarpa Schwein. (Jackson 1915)
V. missouriensis Greene (Jackson 1920)
V. palmata var. *cucullata* A. Gray (Underwood 1893)
V. pubescens Aiton (Arthur and Holway 1901; Jackson 1915; Anderson and Anderson 1919)
V. sororia Willd.; (=*V. papilionacea* Pursh p.p.) (Jackson 1915; Anderson and Anderson 1919)
Viola sp. (Underwood 1893; Cooke 1967; Ruhl et al. 1981; Schoknecht 1981)
V. striata Aiton (Underwood 1893; Arthur 1899; Arthur and Holway 1901; Jackson 1915; Anderson and Anderson 1919)
Host not reported (Van Hook 1910) [reported as *P. violaceae*]

***Puccinia virgata* Ellis & Everh.**

Sorghum bicolor subsp. *bicolor* (L.) Moench (=*S. vulgare* Pers.) (Poaceae)
PUR: N7456

Puccinia vulpinoideae Dietel & Holw. [as'*vulpinoidis*']
See: *Puccinia dioicae* Magnus, s.lat.

Puccinia windsoriae Burrill
See: *Puccinia schedonnardi* Kellerm. & Swingle

***Puccinia windsoriae* Schwein.**

Ptelea perfoliatum (Rutaceae) (Snyder 1896) [Doubtful host]
P. trifoliata L. (Underwood 1893; Jackson 1915; Anderson and Anderson 1919)
Sieglingia seslerioides Scribn. (Poaceae) (Arthur 1899)
Tridens flavus (L.) Hitchc. (=*Triodia flava* (L.) Hitchc.) (Poaceae) (Anderson and Anderson 1919; Cooke 1967, 1975); [as '*flava*'] (Jackson 1915)

***Puccinia xanthii* Schwein.**

Ambrosia sp. (Asteraceae)
A. trifida L. (Asteraceae) (Underwood 1893; Snyder 1896; Arthur 1899; Jackson 1915)
Xanthium sp. (Asteraceae)
X. spinosum L. (Jackson 1915; USDA 1960; McCain et al. 1990)
X. strumarium L. (Underwood 1893; Arthur 1899); var. *canadense* (Mill.) Torr. & A. Gray (McCain et al. 1990); var. *canadense* (=*X. commune* Britton [as '*communis*']) (Jackson 1915); var. *canadense* (=*X. canadense* Mill.) (Underwood 1893; Snyder 1896; Arthur 1899; Anderson and Anderson 1919); var. *canadense* (=*X. pensylvanicum* Wallr.) (Jackson 1915); var. *canadense* (Mill.) Torr. & A. Gray (=*X. italicum* Moretti); var. *glabratum* (DC.) Cronquist (McCain et al. 1990); var. *glabratum* (DC.) Cronquist (=*X. americanum* Walter) (Jackson 1915)
Host not reported (Van Hook 1910)

***Puccinia xanthii* f.sp. *ambrosiae-trifidae* S.W.T. Batra [as '*ambrosia-trifidae*']**

Ambrosia trifida L. (Asteraceae) (Batra 1981)

***Puccinia* sp.**

Poa pratensis L. (Poaceae) (Ruhl et al. 1981)

***Pucciniastrum agrimoniae* (Dietel) Tranzschel**

Agrimonia eupatoria L. (Rosaceae) (Underwood 1893; Snyder 1896)

A. gryposepala Wallr. (Anderson and Anderson 1919; Emmons et al. 1960)

A. hirsuta Bickn. (Arthur 1899; Jackson 1915)

A. microcarpa Wallr. (Hiratsuka 1958)

A. parviflora Aiton (Underwood 1893; Arthur 1899; Jackson 1915; Hiratsuka 1958)

A. pubescens Wallr. (Cooke 1975); (=*A. mollis* (Torr. & A. Gray) Britton) (Jackson 1915)

A. rostellata Wallr. (Jackson 1920; Hiratsuka 1958)

Agrimonia sp.

Host not reported (Cooke 1967)

Pucciniastrum americanum (Farl.) Arthur

See: *Thekopsora americana* (Farl.) Aime & McTaggart

Pucciniastrum goeppertianum (Kuehn) Kleb.

See: *Calyptospora columnaris* (Alb. & Schwein.) J.G. Kühn

***Pucciniastrum hydrangeae* (Magnus) Arthur**

Hydrangea arborescens L. (Hydrangeaceae) (Underwood 1893;; Snyder 1896; Arthur 1899; Jackson 1915; Anderson and Anderson 1919; Cooke 1967, 1975; Schoknecht 1981)

Hydrangea sp.

H.cinerea Small (=*H. arborescens* subsp. *discolor* (Ser. ex DC.) McClint.) (McCain et al. 1990)

H. paniculata Siebold (USDA 1960)

Tsuga canadensis (L.) Carriere (Pinaceae) (USDA 1960)

Pucciniastrum myrtilli Arthur

See: *Naohidemyces vaccinii* (Jørst.) S. Sato, Katsuya & Y. Hirats. ex Vanderweyen & Fraiture

Pucciniastrum vaccinii (G. Winter) Jørst. 1952

See: *Naohidemyces vaccinii* (Jørst.) S. Sato, Katsuya & Y. Hirats. ex Vanderweyen & Fraiture

***Pucciniosira tuberculata* (Ellis & Kellerm.) Buriticá & J.F. Hennen**

Callirhoe involucrata (Torr. & A. Gray) A. Gray (Malvaceae) (USDA 1960)

***Ravenelia epiphylla* (Schwein) Dietel**

Tephrosia virginiana (L.) Pers. (=*T. virginiana* var. *holosericea* (Nutt.) Torr. & A. Gray) (Fabaceae); (=*Cracca virginiana* L.) (Jackson 1915)

Roestelia lacerata (Sowerby) Fr.

See: *Gymnosporangium globosum* Farl.

Roestelia pyrate Thaxt.

See: *Gymnosporangium juniperi-virginianae* Schwein.

Teleutospora rudbeckiae (Arthur & Holw.) Arthur & Bisby

See: *Uromyces rudbeckiae* Arthur & Holw.

***Thekopsora americana* (Farl.) Aime & McTaggart**

Rubus idaeus L. (Rosaceae)

***Tranzschelia arthurii* Tranzschel & M.A. Litv.**

Hepatica nobilis var. *acuta* (Pursh) Steyerm. (Ranunculaceae); var. *acuta* (=*H. acutiloba* DC.) (Underwood 1893; Jackson 1915; Anderson and

Anderson 1919; Van Hook 1934); var. *obtusa* (Pursh) Steyerm. (=*H. triloba* Chaix) (Anderson and Anderson 1919)

Prunus serotina Ehrh. (Rosaceae) (Jackson 1920; Lopez-Franco and Hennen 1990); var. *serotina* Ehrh. (Lopez-Franco and Hennen 1990)

P. virginiana L. (Rosaceae) (Lopez-Franco and Hennen 1990)

Tranzschelia fusca (Pers.) Dietel

See: *Tranzschelia pseudofusca* M. Scholler & M. Abbasi

***Tranzschelia pruni-spinosae* (Pers.) Dietel**

Anemone quinquefolia L. (Ranunculaceae) (Jackson 1920; Lopez-Franco and Hennen 1990)

Thalictrum dioicum L. (Ranunculaceae) (USDA 1960)

***Tranzschelia pruni-spinosae* var. *americana* López-Franco & Hennen**

Prunus americana Marshall (Rosaceae)

***Tranzschelia pseudofusca* M. Scholler & M. Abbasi**

Anemone quinquefolia L. (Ranunculaceae) (Underwood 1893; Arthur 1899; Jackson 1915; Jackson 1920; Lopez-Franco and Hennen 1990)

Ranunculus repens L. (Ranunculaceae) (Underwood 1893)

Tranzschelia punctata Arthur

Note: This name as applied could refer to *Tranzschelia arthurii* Tranzschel & M.A. Litv., *T. pruni-spinosae* (Pers.) Dietel or *Aecidium dakotense* Griffiths

***Tranzschelia thalictri* (Chev.) Dietel**

Thalictrum dioicum L. (Ranunculaceae) (Underwood 1893; Arthur 1899; Jackson 1915; Anderson and Anderson 1919; Lopez-Franco and Hennen 1990)

***Triphragmium ulmariae* (DC.) Link**

Filipendula rubra (Hill.) B.L. Rob. (=*Spiraea rubra* (Hill) Britton) (Rosaceae) (Jackson 1915; Jackson 1920; Arthur 1934; Monoson 1975)

F. ulmaria (L.) Maxim. (USDA 1960)

Ulmaria sp. (Rosaceae) (Monoson 1975)

***Uredinopsis americana* Syd. & P. Syd.**

Onoclea sensibilis L. (Onocleaceae) (Jackson 1917; Hiratsuka 1958)

***Uredinopsis arthurii* Faull**

Woodwardia virginica (L.) Sm. (Blechnaceae) (USDA 1960)

***Uredinopsis atkinsonii* Magnus**

Cystopteris bulbifera (L.) Bernh. (=*Filix bulbifera* (L.) Underw.) (Cystopteridaceae) (Jackson 1920)

Thelypteris palustris var. *pubescens* (G. Lawson) Fernald (=*Dryopteris thelypteris* var. *pubescens* (G. Lawson) A.R. Prince ex Weath.) (Thelypteridaceae) (Hiratsuka 1958); (=*D. thelypteris* (L.) A. Gray) (Jackson 1917)

Host not reported (Van Hook 1934)

***Uredinopsis ceratophora* Faull**

Cystopteris bulbifera (L.) Bernh. (=*Filix bulbifera* (L.) Underw.) (Cystopteridaceae) (USDA 1960)

Uredinopsis mirabilis (Peck) Magnus

See: *Uredinopsis americana* Syd. & P. Syd.

***Uredinopsis osmundae* Magnus**

Abies balsamea (L.) Mill. (Pinaceae)

Osmunda claytoniana L. (Osmundaceae)

***Uredinopsis pteridis* Dietel & Holw.**

Pteridium aquilinum (Dennstaedtiaceae) [as *Pteris aquilina* L. (Pteridaceae)] (Lee 1929)

***Uredinopsis struthiopteridis* F.C.M. Störmer**

Athyrium filix-foemina var. *cyclosorum* Rupr. (Dryopteridaceae)

Cystopteris bulbifera (L.) Bernh. (=*Filix bulbifera* (L.) Underw.) (Cystopteridaceae)

Thelypteris palustris Schott (Thelypteridaceae)

Woodwardia virginica (L.) Sm. (Blechnaceae)

W. virginica (=*Anchistea virginica* (L.) C. Presl) (Jackson 1920)

Uredo bigelowii (Thüm.) Arthur

See: *Melampsora paradoxa* Dietel & Holw.

Uredo hydrangeae Berk. & M.A. Curtis

See: *Pucciniastrum hydrangeae* (Magnus) Arthur

Uredo polypodii (Pers.) DC.

See: *Hyalopsora polypodii* (Pers.) Magnus

Uredo similis Ellis

See: *Puccinia globosipes* Peck

***Uromyces acuminatus* Arthur**

Collomia linearis Nutt. (Polemoniaceae)

Lysimachia ciliata L. (Primulaceae)

Maianthemum stellatum (L.) Link (=*Smilacina stellata* (L.) Desf.) (Asparagaceae) (McCain et al. 1990)

Phlox divaricata L. (Polemoniaceae)

P. maculata L. (Jackson 1920)

Polygonatum biflorum (Walter) Elliott (Asparagaceae) (Jackson 1917)

Polemonium reptans L. (Polemoniaceae) (Jackson 1915; USDA 1960)

Smilacina sp. (Liliaceae)

Spartina pectinata Bosc ex Link (Poaceae); (=*S. michauxiana* Hitchc.) (Jackson 1915)

S. pectinata Link

Spartina sp.

Uromyces acuminatus var. *polemonii* (Arthur) Davis

See: *Uromyces acuminatus* Arthur

***Uromyces americanus* Speg.**

Schoenoplectus tabernaemontani (C.C. Gmelin) Palla (=*Scirpus validus* Vahl) (Cyperaceae) (USDA 1960)

***Uromyces amphidymus* Syd. & P. Syd.**

Glyceria septentrionalis Hitchc. (Poaceae) (USDA 1960); (=*Panicularia septentrionalis* (Hitchc.) E.P. Bicknell) (Jackson 1915)

***Uromyces andropogonis* Tracy**

Andropogon gyrans Ashe var. *gyrans* (=*elliottii* Chapm.) (Poaceae) (Hennen 1965)

A. virginicus L. (Hennen 1965)

Viola cucullata Aiton (=*V. obliqua* Hill) (Violaceae) (Arthur and Holway 1901)

V. affinis Le Conte

***Uromyces appendiculatus* var. *appendiculatus* (Pers.) Unger**

Phaseolus diversifolius Pers. (Fabaceae) (Snyder 1896)

Phaseolus sp. (Underwood 1893)
P. vulgaris L. (Jackson 1915; Pipal 1915; Anderson and Anderson 1919; Ruhl et al. 1981, 1982)
Strophostyles angulosa Elliott (Fabaceae) (Underwood 1893)
S. helvola (L.) Elliott (Arthur 1899; Jackson 1915; Anderson and Anderson 1919)
S. leiosperma (Torr. & A. Gray) Piper (=*S. pauciflora* (Benth.) S. Watson) (Jackson 1915)
S. umbellata (Muhl. ex Willd.) Britton (Jackson 1915)
Vigna angularis (Willd.) Ohwi & Ohashi (=*P. angularis* (Willd.) W. Wight) (Fabaceae) (USDA 1960) [Doubtful host]
Host not reported (Van Hook 1910)

***Uromyces ari-triphylli* (Schwein.) Seeler**

Arisaema dracontium (L.) Schott (Araceae) (Underwood 1893; Snyder 1896; Arthur 1899; Jackson 1915; Anderson and Anderson 1919)
A. triphyllum (L.) Schott (Underwood 1893; Snyder 1896, 1898; Arthur 1899; Jackson 1915; Anderson and Anderson 1919; Cooke 1967, 1975)
Peltandra virginica (L.) Schott (Araceae) (Jackson 1915; USDA 1960)
Host not reported (Van Hook 1910)

***Uromyces asclepiadis* Cooke**

Asclepias cornuti Decne. (Apocynaceae) (Underwood 1893; Snyder 1896, 1898)
A. incarnata L. (Jackson 1915, 51; Snyder 1896; Arthur 1899; Anderson and Anderson 1919)
A. purpurascens L. (Underwood 1893; Arthur 1899; Jackson 1915; Anderson and Anderson 1919)
A. syriaca L. (Arthur 1899; Jackson 1915; Anderson and Anderson 1919)
A. tuberosa L.
Matelea obliqua (Jacq.) Woodson (Asclepiadaceae); (=*Vincetoxicum shortii* (A. Gray) Britton) (Jackson 1915)
Host not reported (Van Hook 1910)

Uromyces caladii Farl.

See: *Uromyces ari-triphylli* (Schwein.) Seeler

Uromyces caryophyllinus (Schrank) J. Schröt.

See: *Uromyces dianthi* (Pers.) Niessl

***Uromyces coloradensis* Ellis & Everh.**

Vicia americana Muhl. ex Willd. (Fabaceae) (Jackson 1920)

***Uromyces dactylidis* G.H. Otth**

Poa pratensis L. (Poaceae) (Jackson 1915; USDA 1960)

***Uromyces dianthi* (Pers.) Niessl**

Dianthus caryophyllus L. (Caryophyllaceae) (Arthur 1899; Jackson 1915; Pipal 1915; Anderson and Anderson 1919)
Dianthus spp. (Underwood 1893; Van Hook 1912)

***Uromyces dictyospermae* Ellis & Everh. ex Tranzschel**

Euphorbia spathulata Lam. (Euphorbiaceae)

***Uromyces elegans* (Berk. & M.A. Curtis) Lagerh.**

Trifolium carolinianum Michx. (Fabaceae)

***Uromyces eragrostidis* Tracy**

Echeandia flavescens (Schult. & Schult. f.) Cruden (=*Anthericum torreyi* Baker) (Asparagaceae)

Uromyces euphorbiae Cooke & Peck

See: *Uromyces proëminens* (DC.) Lév.

Uromyces fabae (Pers.) de Bary

See: *Uromyces viciae-fabae* (Pers.) J. Schröt.

Uromyces fallens (Desm.) Barthol.

See: *Uromyces trifolii-repentis* var. *fallens* (Desm.) Arthur

Uromyces gaurinus (Peck) Snyder [as '*gaurina*']

See: *Uromyces plumbarius* Peck

***Uromyces geranii* (DC.) Lév.**

Geranium maculatum L. (Geraniaceae) (Underwood 1893; Snyder 1896, 1898)

Uromyces graminicola Burrill

See: *Puccinia graminicola* (Burrill) Demers & Castl.

***Uromyces halstedii* De Toni**

Leersia oryzoides (L.) Sw. (Poaceae) (USDA 1960)

Trillium sp. (Melanthiaceae) (Snyder 1896; Jackson 1917)

***Uromyces hedysari-paniculati* (Schwein.) Farl.**

Desmodium canadense (L.) DC. (=*Meibomia canadensis* (L.) Kuntze) (Fabaceae) (Snyder 1896; Arthur 1899)

D. canescens (L.) DC. (Underwood 1893; Anderson and Anderson 1919); (=*Meibomia canescens* (L.) Kuntze) (Arthur 1899; Jackson 1915)

D. ciliare (Muhl. ex Willd.) DC. (McCain et al. 1990)

D. cuspidatum (Muhl. ex Willd.) DC. ex D. Don var. *cuspidatum* (=*M. bracteosa* (Michx.) Kuntze) (Jackson 1915); var. *longifolium* (Torr. & A. Gray) B.G. Schub. (McCain et al. 1990)

D. glabellum (Michx.) DC. (=*D. dillenii* Darl.) (Anderson and Anderson 1919)

D. laevigatum (Nutt.) DC. (=*M. laevigata* (Nutt.) Kuntze) (Underwood 1893; Arthur 1899; Jackson 1915; Anderson and Anderson 1919)

D. paniculatum (L.) DC. (Underwood 1893; Anderson and Anderson 1919); var. *paniculatum* (=*M. paniculata* (L.) Kuntze) (Arthur 1899; Jackson 1915)

D. perplexum B.G. Schub.; (=*M. dillenii* (Darl.) Kuntze) (Snyder 1896; Arthur 1899; Jackson 1915); (=*D. dillenii* Darl.) (Underwood 1893)

D. rotundifolium DC. (Emmons et al. 1960); (=*M. michauxii* Vail) (Jackson 1920)

D. sessilifolium (Torr.) Torr. & A. Gray (McCain et al. 1990)

Desmodium sp. (Underwood 1893; Cooke 1967, 1975)

D. viridiflorum (L.) DC. (Underwood 1893)

D. viridiflorum (L.) DC. (=*M. viridiflora* (L.) Kuntze) (Arthur 1899; Jackson 1915)

Uromyces hordei Tracy

See: *Uromyces hordeinus* (Arthur) Barthol.

***Uromyces hordeinus* (Arthur) Barthol.**

Hordeum pusillum Nutt. (Poaceae) (Jackson 1920)

Nothoscordum bivalve (L.) Britton (Amaryllidaceae)

***Uromyces houstoniatus* (Schwein.) J. Sheld.**

Houstonia caerulea L. (Rubiaceae) (Jackson 1917)

H. longifolia Gaertn.

Sisyrinchium angustifolium Mill. (=*S. gramineum* Curtis) (Iridaceae)

Uromyces howei Peck

See: *Uromyces asclepiadis* Cooke

Uromyces hyperici M.A. Curtis

See: *Uromyces triquetrus* Cooke

Uromyces hyperici-frondosi (Schwein.) Arthur

See: *Uromyces triquetrus* Cooke

***Uromyces junci* (Desm.) Tul. & C. Tul.**

Ambrosia artemisiifolia Bess. (Asteraceae)

Ambrosia psilostachya DC. (Asteraceae)

Cirsium flodmanii Arthur (Asteraceae)

Juncus tenuis Willd. (Juncaceae) (Snyder 1896, 1898; Arthur 1899)

***Uromyces junci-effusi* P. Syd. & Syd.**

Juncus effusus L. (Juncaceae) (McCain et al. 1990)

Uromyces lespedezae Peck

See: *Uromyces lespedezae-procumbentis* (Schwein.) M.A. Curtis

***Uromyces lespedezae-procumbentis* (Schwein.) M.A. Curtis**

Lespedeza capitata Michx. (Fabaceae) (Jackson 1915)

L. frutescens (L.) Hornem. (Arthur 1899; Jackson 1915; Anderson and Anderson 1919); (=*L. intermedia* (S. Watson) Britton, nom. inq.) (McCain et al. 1990)

L. hirta (L.) Hornem. (Jackson 1915)

L. procumbens Michx. (Underwood 1893; Arthur 1899; Jackson 1915; Anderson and Anderson 1919)

L. repens (L.) W.P.C. Barton (Snyder 1896; Arthur 1899; Jackson 1915; McCain et al. 1990)

L. reticulata Pers. (Underwood 1893)

Lespedeza sp. (Underwood 1893; Cooke 1975, 1967)

L. stuevei Nutt. (Jackson 1915)

L. violacea (L.) Pers. (Coulter 1876; McCain et al. 1990)

L. virginica (L.) Britton (Jackson 1915); f. *deamii* M. Hopkins (McCain et al. 1990)

Lespedeza × *brittonii* E.P. Bicknell (pro sp.) [*procumbens* × *virginica*] (McCain et al. 1990)

Lespedeza × *nuttallii* Darl. (pro sp.) [*hirta* × *violacea*] (McCain et al. 1990)

Uromyces lineolatus (Desm.) J. Schröt.

See: *Uromyces lineolatus* subsp. *nearcticus* Savile

***Uromyces lineolatus* subsp. *nearcticus* Savile**

Cicuta maculata L. (Apiaceae) (Jackson 1915)

Sium suave Walter (=*Sium cicutifolium* Schrank) (Apiaceae)

Schoenoplectus americanus (Pers.) Volkart ex Schinz & R. Keller (=*Scirpus americanus* Pers.) (Cyperaceae) (Jackson 1915; Anderson and Anderson 1919)

S. fluviatilis (Torr.) M.T. Strong (=*Bolboschoenus fluviatilis* (Torr.) Soják); (=*Scirpus fluviatilis* (Torr.) A. Gray) (Jackson 1920; Savile 1972)

S. tabernaemontani (C.C. Gmel.) Palla (=*Scirpus validus* Vahl) (Jackson 1915; Cummins 1935)

Uromyces magnatus Arthur

See: *Uromyces acuminatus* Arthur

Uromyces medicaginis Pass.

See: *Uromyces striatus* J. Schröt.

***Uromyces minutus* Dietel**

Carex lanuginosa Michx. (Cyperaceae) (Jackson 1915)

C. virescens Muhl. ex Willd. (Jackson 1915)

Uromyces orobi (Pers.) G. Winter

See: *Uromyces viciae-fabae* (Pers.) J. Schröt.

***Uromyces peckianus* Farl.**

Atriplex prostrata Bouchér ex DC. (=*Atriplex hastata* L.) (Chenopodiaceae)

***Uromyces perigynius* Halst.**

Carex albicans var. *albicans* Willd. ex Spreng. (=*C. varia* Muhl. ex Wild) (Cyperaceae) (Jackson 1915) PUR: 12781; (=*C. artitecta* Mack.)

C. grayi Carey; (=*C. asa-grayi* L.H. Bailey) (Jackson 1920)

C. intumescens Rudge

C. pubescens Poir. (Underwood 1893; Arthur 1899)

Carex sp.

C. tribuloides Wahlenb. (Jackson 1915)

Gaura biennis L. (Onagraceae)

Oenothera biennis L. (Onagraceae)

Rudbeckia laciniata L. (Asteraceae) (Jackson 1920)

Solidago caesia L. (Asteraceae)

S. canadensis L. PUR: 12708

S. flexicaulis L.

S. rugosa Mill.

S. serotina Aiton

Symphyotrichum ericoides var. *ericoides* (L.) G.L. Nesom (=*Aster ericoides* L.) (Asteraceae)

Symphyotrichum foliaceum var. *canbyi* (A. Gray) G.L. Nesom (=*A. tweedyi* Rydb.)

Symphyotrichum lanceolatum subsp. *lanceolatum* var. *lanceolatum* (Willd.) G.L. Nesom (=*A. paniculatus* Lam. p.p., non)

Uromyces phaseoli G. Winter

See: *Uromyces appendiculatus* (Pers.) Unger

Uromyces phaseoli var. *strophostylis* Arthur

See: *Uromyces appendiculatus* var. *appendiculatus* (Pers.) Unger

Uromyces phaseoli var. *typica* Arthur, nom. inval.

See: *Uromyces appendiculatus* var. *appendiculatus* (Pers.) Unger

***Uromyces plumbarius* Peck**

Gaura biennis L. (Onagraceae) (Jackson 1915; Snyder 1896; Arthur 1899)

Oenothera biennis L. (Onagraceae) (Jackson 1915)

Uromyces polemonii (Peck) Barthol.

See: *Uromyces acuminatus* Arthur

Uromyces polygoni (Pers.) Fuckel

See: *Uromyces polygoni-avicularis* (Pers.) G.H. Otth

***Uromyces polygoni-avicularis* (Pers.) G.H. Otth**

Polygonum aviculare L. (Polygonaceae) (Underwood 1893; Snyder 1896; Arthur 1899; Jackson 1915; Anderson and Anderson 1919)

P. erectum L. (Underwood 1893; Arthur 1899; Jackson 1915)

P. punctatum Elliott var. *punctatum* (=*P. acre* Kunth) (Underwood 1893)

Uromyces porosus (Peck) H.S. Jacks.

See: *Uromyces coloradensis* Ellis & Everh.

***Uromyces proëminens* (DC.) Lév.**

Chamaesyce humistrata (Engelm. ex A. Gray) Small (Euphorbiaceae) (Jackson 1915); (=*Euphorbia humistrata* Engelm. ex A. Gray) (Anderson and Anderson 1919)

C. hypericifolia (L.) Millsp. (=*E. hypericifolia* L.) (Underwood 1893; Snyder 1896, 1898)
C. hyssopifolia (L.) Small
C. maculata (L.) Small (=*E. maculata* L.) (Underwood 1893; Snyder 1896; Jackson 1915; Anderson and Anderson 1919)
C. nutans (Lag.) Small (=*C. preslii* (Guss.) Arthur) (Jackson 1915); (=*E. nutans* Lag.) (Arthur 1899)
Euphorbia corollata L. (Euphorbiaceae) (Underwood 1893); (=*E. preslii* Guss.) (Underwood 1893; Anderson and Anderson 1919; Van Hook 1934)
E. dentata Michx. (Underwood 1893; Snyder 1896; Anderson and Anderson 1919); var. *dentata* (=*Poinsettia dentata* (Michx.) Klotzsch & Garcke) (Snyder 1896; Arthur 1899; Jackson 1915)
E. glyptosperma (Engelm.) Small
E. heterophylla L.; (=*P. heterophylla* (L.) Klotzsch & Garcke) (Jackson 1915)
E. maculata L.
Euphorbia sp. (Underwood 1893)
Host not reported (Van Hook 1910)

***Uromyces punctatus* J. Schröt.**

Astragalus canadensis L. (Fabaceae)

***Uromyces rhynchosporae* Ellis**

Rhynchospora alba (L.) Vahl (Cyperaceae) (Jackson 1915)
R. capitellata (Michx.) Vahl
R. glomerata (L.) Vahl (Jackson 1920)

***Uromyces rudbeckiae* Arthur & Holw.**

Rudbeckia laciniata L. (Asteraceae) (Snyder 1898; Arthur 1899; Jackson 1915; Anderson and Anderson 1919)

Uromyces scirpi Burrill

See: *Uromyces lineolatus* subsp. *nearcticus* Savile

***Uromyces seditiosus* F. Kern**

Aristida longespica Poir. (Poaceae) (Cummins and Husain 1966)
A. oligantha Michx. (=*A. ramosissima* Engelm.) (Jackson 1917; Jackson 1920; Cummins and Husain 1966)
A. adscensionis L. (McCain et al. 1990)
Plantago aristata Michx. (Plantaginaceae)
P. lanceolata L.
P. rugelii Decne.

***Uromyces silphii* (Syd. & P. Syd.) Arthur**

Heliopsis helianthoides (L.) Sweet (Asteraceae)
Juncus anthelatus (Wiegand) R.E. Brooks (=*J. tenuis* var. *anthelatus* Wiegand) (Juncaceae)
J. dudleyi Wiegand (Jackson 1915)
Juncus sp.
J. tenuis Willd. (Jackson 1915)
Silphium integrifolium Michx. (Asteraceae)
S. perfoliatum L. (Jackson 1915)

Uromyces solidaginis-caricis Arthur

See: *Uromyces perigynius* Halst.

***Uromyces sparganii* Cooke & Peck**

Acorus calamus L. (Acoraceae) (Parmelee and Savile 1954)

***Uromyces spermacoces* (Schwein.) M.A. Curtis**

Diodia teres Walter (Rubiaceae) (Jackson 1915; Emmons et al. 1960)

***Uromyces sporoboli* Ellis & Everh.**

Allium canadense L. (Amaryllidaceae)

Allium sp.

Sporobolus compositus var. *compositus* (Poir.) Merr. (=*S. asper* (P. Beauv.) Kunth) (Poaceae) (Cummins and Greene 1961)

S. vaginiflorus (Torr. ex A. Gray) Alph. Wood

***Uromyces striatus* J. Schröt.**

Medicago lupulina L. (Fabaceae) (Jackson 1915; McCain et al. 1990)

M. sativa L. (Jackson 1915; Pipal 1915; Ruhl et al. 1982)

Uromyces terebinthi (DC.) G. Winter

See: *Pileolaria brevipes* Berk. & Ravenel

Uromyces trifolii (Alb. & Schwein.) G. Winter, sensu Underwood (1893)

See: *Uromyces trifolii-repentis* var. *trifolii-repentis* Liro and *U. trifolii-repentis* var. *fallens* (Arthur) Cumm.

Uromyces trifolii (Alb. & Schwein.) G. Winter

See: *Uromyces trifolii-repentis* var. *fallens* (Arthur) Cumm.

Host not reported (Van Hook 1910)

Uromyces trifolii (R. Hedw.) Lév.

See: *Uromyces trifolii-repentis* var. *trifolii-repentis*

Uromyces trifolii var. *fallens* (Desm.) Arthur

See: *Uromyces trifolii-repentis* var. *fallens* (Desm.) Arthur

***Uromyces trifolii-repentis* var. *trifolii-repentis* Liro**

Trifolium hybridum L. (Fabaceae) (Underwood 1893; Arthur 1899; Jackson 1915)

T. medium L. (Jackson 1915)

T. repens L. (Underwood 1893; Arthur 1899; Jackson 1915)

T. campestre Schreb. (=*T. procumbens* L.) (Anderson and Anderson 1919) [Doubtful host]

Trifolium sp. (Pipal 1915)

***Uromyces trifolii-repentis* var. *fallens* (Desm.) Cumm.**

Trifolium medium L. (Fabaceae) (Underwood 1893; USDA 1960)

T. pratense L. (Underwood 1893; Snyder 1896, 1898; Arthur 1899; Jackson 1915; Anderson and Anderson 1919)

T. repens L. (Jackson 1915) PUR: 15471

Trifolium sp. (Pipal 1915)

***Uromyces triquetrus* Cooke**

Elodes campanulata Pursh (Clusiaceae) (Underwood 1893)

Hypericum canadense L. (Clusiaceae) (Underwood 1893; Arthur 1899; Jackson 1915)

H. adpressum W.P.C. Barton (McCain et al. 1990)

H. cistifolium Lam.

H. ellipticum Hook.

H. kalmianum L. (McCain and Hennen 1981)

H. mutilum L. (Underwood 1893; Arthur 1899; Jackson 1915)

H. prolificum L. (Jackson 1920; Emmons et al. 1960)

Hypericum sp. (Emmons et al. 1960)

Triadenum virginicum (L.) Raf. (Clusiaceae) (Arthur 1899; Jackson 1915)

***Uromyces valens* F. Kern**

Carex lupulina Muhl. ex Willd. (Cyperaceae) (Jackson 1915); (=*C. lupulina* Muhl. ex Willd. var. *pedunculata* A. Gray) (Underwood 1893)

Carex sp. (USDA 1960)

C. rostrata Stokes (Jackson 1915)

C. utriculata Boott (Kern 1910)

***Uromyces verruculosus* J. Schröt.**

Silene latifolia subsp. *alba* (Mill.) Greuter & Burdet (=*Lychnis alba* Mill.) (Caryophyllaceae) (USDA 1960)

***Uromyces viciae-fabae* (Pers.) J. Schröt.**

Lathyrus palustris L. (Fabaceae) (Anderson and Anderson 1919)

Lathyrus sp.

L. venosus Muhl. ex Willd. (Jackson 1915); (reported as *Vicia americana* Muhl. ex Willd.) (Snyder 1896; Arthur 1899)

***Uromyces vignae* Barcl.**

Vigna unguiculata (L.) Walp. (Fabaceae); (=*Vigna sinensis* (L.) Savi ex Hassk.) (Fabaceae) (Jackson 1915)

***Uropyxis amorphae* (M.A. Curtis) J. Schröt.**

Amorpha canescens Pursh (Fabaceae) (Underwood 1893; Arthur 1899; Jackson 1915)

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Additional information

Conflict of interest

The authors have declared that no competing interests exist.

Ethical statement

No ethical statement was reported.

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Author contributions

Conceptualization: MA, MCA. Data curation: TJJTC, MCA, MA. Formal analysis: MA, TJJTC. Funding acquisition: MCA. Investigation: MA. Methodology: MCA, MA. Project administration: MCA. Resources: DRS. Supervision: MCA. Validation: MA, MCA. Visualization: TJJTC. Writing - original draft: TJJTC. Writing - review and editing: TJJTC, MCA, DRS, MA.

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Data availability

All of the data that support the findings of this study are available in the main text or Supplementary Information.

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Supplementary material 1

Number of rust specimens deposited in the Arthur Fungarium by number of specimens per Indiana county ranked from highest to lowest

Authors: Terry J. Torres-Cruz

Data type: xls

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Link: https://doi.org/10.3897/mycokeys.121.148853.suppl1

Supplementary material 2

Metadata of specimens evaluated in the study

Authors: Terry J. Torres-Cruz

Data type: xls

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Link: https://doi.org/10.3897/mycokeys.121.148853.suppl2

Supplementary material 3

Results of searching all taxa reported for Indiana in MycoBank and IndexFungorum databases

Authors: Terry J. Torres-Cruz

Data type: xlsx

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